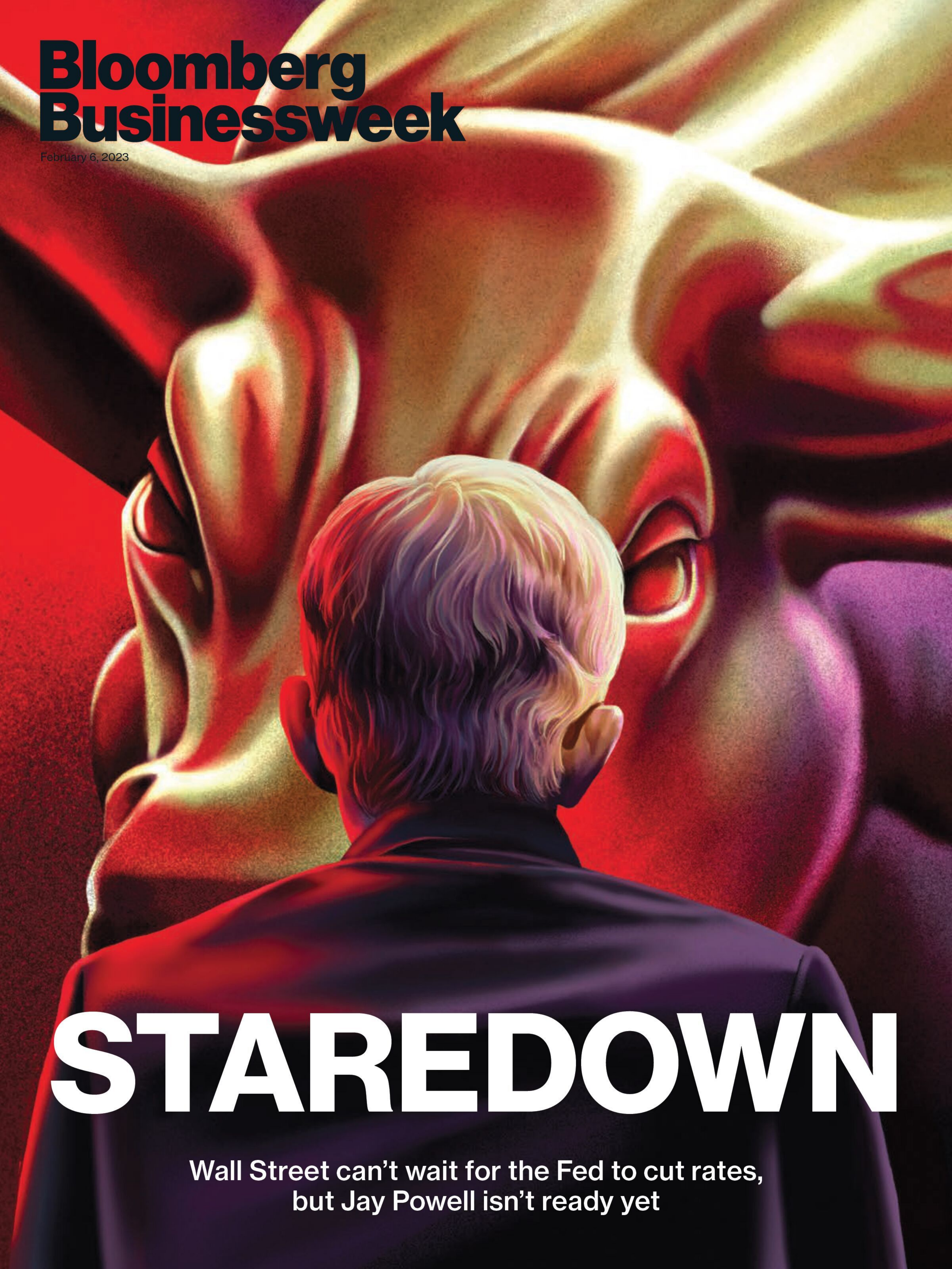
Bloomberg
Businessweek

February 6, 2023



STAREDOWN

Wall Street can’t wait for the Fed to cut rates,
but Jay Powell isn’t ready yet

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KEEPING CLIENTS INVESTED WITH MINIMUM VOLATILITY STRATEGIES

The Great Moderation–a period of low inflation and stable growth–has come to an end. We've entered a new economic regime marked by higher volatility and uncertainty.

Staying invested long term remains crucial for your clients; however, in today's uncertain environment it may be best to shift portfolios to a more defensive stance. Heightened macroeconomic volatility in both growth and inflation will likely translate into heightened volatility in financial markets for the remainder of 2022.

It's easy for your clients to want to seek safety and sell out of equities until the "storm passes," but timing the market can be extremely challenging. Missing out on just a few top returning days can have a material impact on your clients' portfolios.

Clients who can "stick with the plan" may have a better chance of achieving their goals over time. Allocating to a Minimum Volatility strategy using iShares factor ETFs can help keep your clients on track by helping them manage risk and stay invested.

Factoring in volatility: A BlackRock PM's perspective

BlackRock model portfolios, such as the Target Allocation ETF Models, take a long-term view but seek to adapt to current market conditions. The portfolio manager, Michael Gates, believes the current market environment has high uncertainty due to mixed economic data, coupled with an emboldened Fed hiking into a cyclical slowdown. In his view, the Fed's campaign to cool growth, dampen investment and eventually pull down inflation via decreasing demand raises the risk of a potential policy error and therefore may increase the probability of a recession.

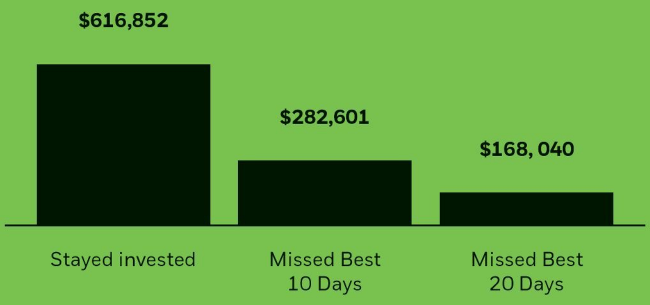
Gates also believes that a bullish case can be made, as unemployment remains near historic lows and corporate and consumer balance sheets remain solid, along with a Fed that has repeatedly demonstrated an ability to abruptly U-turn in recent years. Due to these conflicting investment cases, the Model Portfolio Solutions team has increased allocations to Minimum Volatility in an effort to reduce risk in their portfolios, which they believe will help navigate this range of potential market outcomes.

As we enter a new economic regime, your clients may want to consider rebalancing portfolios to more defensive exposures like Minimum Volatility to seek to reduce risk in their equity sleeves. Tools, such as *Advisor Center 360 Evaluator*, can help financial professionals understand the volatility exposures in their clients' portfolios and navigate potential opportunities in today's environment.

As Tom Wood, BlackRock's Head of US Wealth Portfolio Consulting says, "The biggest risk to a client's portfolio is the risk they don't know they're taking."

Missing the top-performing days can have a dramatic on a portfolio

Hypothetical growth of $100k investment in the S&P 500 Index (1/1/2002 - 12/31/21)



Source: BlackRock, Bloomberg as of 12/31/21. **Index performance is for illustrative purposes only. Index performance does not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in an index. Past performance does not guarantee future results.**

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February 6, 2023

◀ Ricky Starks is among the wrestlers who migrated from WWE to AEW

PHOTOGRAPH BY JAKE HOLLER FOR BLOOMBERG BUSINESSWEEK

FEATURES

34 The New Smackdown
All Elite Wrestling's ascent couldn't come at a worse time for WWE

40 Wrong Way to Do Right?
Sean Penn's CORE Response was a Covid hero—and a money mess

48 An Unhealthy Hack
Russian ransomware's devastating attack on Ireland's public-health system

■ IN BRIEF	6	Ukraine artillery ● President Haley? ● Tyre Nichols
■ OPINION	8	Don't ban TikTok, use it to bargain with China
■ AGENDA	8	Fashion in Vegas ● Art in Mexico ● Women in science
■ REMARKS	10	Facebook won't be the weapon it once was for Trump
1 BUSINESS	12	In Japan, come for the sushi, stay for the snow
	15	Drugstore chains ponder what to do about abortion pills
2 TECHNOLOGY	18	▼ 3D printing may finally be ready to live up to its promise

	20	This livestream service *habla español*—quite a lot, in fact
3 FINANCE	22	It's a great time to be an active mutual fund manager
	24	SPY may lose its No. 1 ETF status, but it was a grand ride
4 ECONOMICS	26	Wall Street wants rate cuts; the Fed isn't having it
	28	So many debt ceiling options, so many stumbling blocks
+ SOLUTIONS / SMALL BUSINESS	30	An egg-cellent solution to the carbon in the henhouse
	31	Renaming your company? Check with a chatbot
	32	Portugal's Carbon Team challenges Asia to a bike race
■ PURSUITS	55	A safari that's about the terrain, not what's roaming on it
	60	More craft beers are celebrating their Hispanic roots
	62	The Razer Blade 17 was born to play games on
	63	Simple is elegant, and this coffeemaker proves it
■ LAST THING	64	To design a really special EV, fiddle with the software

CORRECTIONS

"Tackling Textile Waste" (Solutions, Jan. 30, 2023) said that the Salvation Army's trading unit runs the charity's more than 400 secondhand clothing shops in the UK. The unit runs more than half of them. Ⓑ "Greetings From Crypto Island" (Finance, Jan. 23) identified Antigua and Barbuda as southwest of Florida; they're southeast.

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■ COVER TRAIL

How the cover gets made

❶

"This week we're talking about a highly anticipated matchup."

"Smackdown time! Finally our wrestling coverage is amping up."

"That's actually one of our features. This showdown's more about monetary policy: the Fed versus Wall Street."

"Sweet. I love a Jay Powell cover."

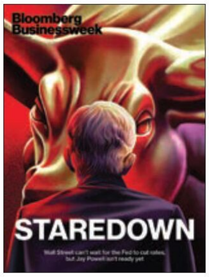
"Fun fact: Did you know that Jay actually goes to Pamplona every year for the running of the bulls? His nickname is 'the Soft Landing,' because his first year he got flung in the air and landed like a feather, totally unharmed."

"Wait—are you serious??"

"No, I'm completely lying."

"Wow, you're the worst. That said, Jay staring down a bull is a pretty cool visual for this story."

"Now, that's the truth."



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STAREDOWN

Cover:
Illustration by Deena So Oteh

TECHNOLOGY: PHOTOGRAPH BY SPENCER LOWELL FOR BLOOMBERG BUSINESSWEEK

Google

We keep more Americans safe online than anyone else

For over 20 years, we've been protecting Americans from cybersecurity threats. From phishing protections to safeguarding the websites of news outlets and human rights organizations, we're building advanced technology that raises the bar for the entire industry and makes the whole internet safer for everyone.

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IN BRIEF

By Mark Leydorf, with Bloomberg News

● Worldwide, there have been 671 million cases of coronavirus and more than

6.8m

deaths. In the US, advisers to the FDA voted unanimously to make bivalent Covid-19 vaccines, designed to fight the omicron strains, standard. And the White House said on Jan. 30 that it will lift the national state of emergency on May 11.

● War in Ukraine

▶ Ukraine's Defense Ministry said on Feb. 1 that it expects fighting to intensify in February and March.

▶ The US said on Jan. 31 that it will not give F-16 fighters to Ukraine, joining the UK and Germany, which have also ruled jets out. But it will provide longer-range artillery and ammunition as part of a new $2 billion assistance package.

▶ The US State Department on Jan. 31 accused Russia of breaching the New Start nuclear-arms reduction treaty by refusing to admit inspectors, mainly because of rising tensions caused by its invasion of Ukraine.

I AM A MAN
JUSTICE

● Reverend Al Sharpton and the family of Tyre Nichols spoke to reporters on Jan. 31 in Memphis. Nichols was beaten to death by police officers after a traffic stop on Jan. 7. Vice President Kamala Harris attended his funeral on Feb. 1.

● The Biden administration is considering cutting off Huawei from Qualcomm, Intel and its other US suppliers.

Sales by American companies to the Chinese telecom giant have been sharply limited since former President Donald Trump added it to the US "entity list" out of national security concerns. Now some White House officials are advocating for a total ban.

● Gross domestic product in the euro area edged up

0.1%

in the last quarter of 2022, Eurostat said on Jan. 30, defying predictions of a slight contraction and suggesting the region may avoid a recession despite double-digit inflation and the war in Ukraine.

● An appeals court said Johnson & Johnson may not use bankruptcy to resolve more than 40,000 cancer claims.

A federal three-judge panel sided with the cancer victims, ruling that J&J wrongly put a specially created unit into bankruptcy to block juries from hearing the baby-powder-related suits. The loss threatens to end a legal maneuver that some of the largest companies in the world have used to fight lawsuits. J&J has vowed to appeal.

● L'Oréal, LVMH and Shiseido are weighing whether to bid for a stake in high-end cosmetics maker Aesop that may value the brand at

$2b

or more, people familiar with the matter say.

● "We can now say for the first time that the disinflationary process has started."

Federal Reserve Chair Jerome Powell speaking to reporters after announcing a quarter-point increase in the Fed's benchmark interest rate target.

● About 475,000 union members went on strike in the UK on Feb. 1.

The widespread action closed schools, crippled the railways and forced thousands of people to work from home. The strikers are demanding bigger pay raises to combat the cost-of-living crisis. Many were given salary increases of less than 5% last year, even as inflation climbed above 10%.

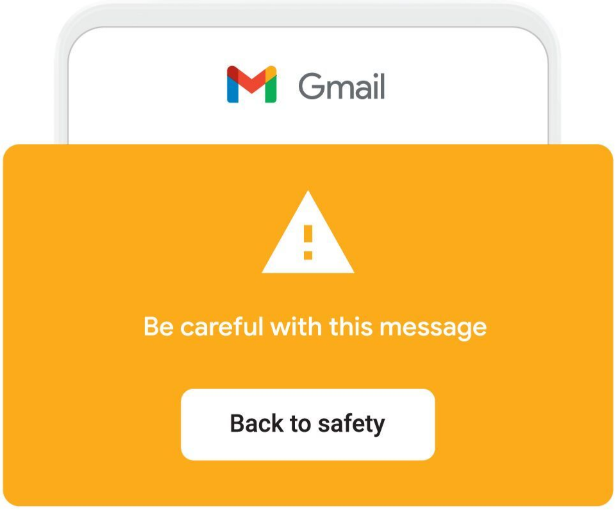
● Former South Carolina Governor Nikki Haley, who served as Donald Trump's UN ambassador, plans to announce a run for president in mid-February, according to a person familiar with her plans. She'd be the first Republican to officially challenge her old boss for the GOP nomination. It's the latest indication that Trump is losing his grip on the party.

MEMPHIS: SETH HERALD/GETTY IMAGES. POWELL: ALEX WONG/GETTY IMAGES. HALEY: THEO WARGO/GETTY IMAGES

Google

9 out of 10 cyberattacks begin with a phishing link

Gmail phishing protections were built to block ⊘ more than 100 million attempts a day



Be careful with this message

Hackers use phishing emails to try and trick people into revealing personal information. Gmail features the most advanced phishing security available, because the best way to combat large-scale phishing operations are even larger-scale defenses.

Explore how Google is keeping more Americans safe online than anyone else at safety.google

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Don't Ban TikTok. Use It as a Bargaining Chip

One can think of many reasons to worry about TikTok, the Chinese-owned video-sharing platform. Its executives seem to lie habitually. Its opaque algorithms and data-collection capabilities appear to be tailor-made to spread propaganda and collect sensitive information. And quite frankly, many of the most popular videos on the app seem positively deranged.

Even so: Banning it outright—as Congress is contemplating—is a bad idea.

For one thing, TikTok's threats shouldn't be exaggerated. The US has already banned the ByteDance Ltd.-owned app on government devices, thereby eliminating the most pressing risks it posed. As for consumers, most of the data TikTok collects can be easily accessed elsewhere, and China's overseas propaganda hasn't been notably successful.

So far, US lawmakers have argued vaguely that the app might one day be wielded against American users. If they wish to impose a ban, they need to make a more convincing case that it's likely to cause real harm. The US has rightly criticized China for blocking American tech companies over specious national-security concerns; it needs to make clear it isn't doing the same.

TikTok, moreover, is hugely popular. It has more than 100 million active US users, including about 67% of teens. Many young people make their living creating content for the app. This popularity, achieved in a matter of months, has made TikTok a serious competitor to previously dominant US tech companies.

That's a good thing: It's spurring innovation and growth. And without articulating a clearer rationale for blocking the company, the US will be susceptible to charges of simple protectionism—and hard-pressed to criticize others for similar conduct.

To be clear, none of these facts amounts to a dispositive defense of TikTok. But lawmakers should at least consider them before dropping the hammer. At a minimum, they should weigh mitigation measures—such as establishing a company-backed oversight board that reports to the government and requiring TikTok to store personal information locally—that might allay security concerns. (The Committee on Foreign Investment in the US, or Cfius, is in talks with the company about such measures, according to Bloomberg reporting.)

Perhaps the most important reason to avoid banning TikTok though, is that it means the US would miss an opportunity. With members of Congress on both sides of the aisle keen to crack down on the app, President Joe Biden's administration might instead ask Chinese leaders to come to the negotiating table. In exchange for forestalling a ban, it could ask for security concessions on TikTok—one of the country's few notable tech exports—and press for better treatment of US companies in China. It could even try to establish reasonable rules of the road for the digital economy, including on online privacy, data security, market access and more.

In fact, a process of this kind—peaceful, technical, incredibly boring—is precisely the kind of thing the US and China could use right now, at a moment otherwise simmering with tension and unpredictability. Instead, Congress seems to be choosing blunt force. Don't expect much progress. Ⓑ

For more commentary, go to bloomberg.com/opinion

■ AGENDA

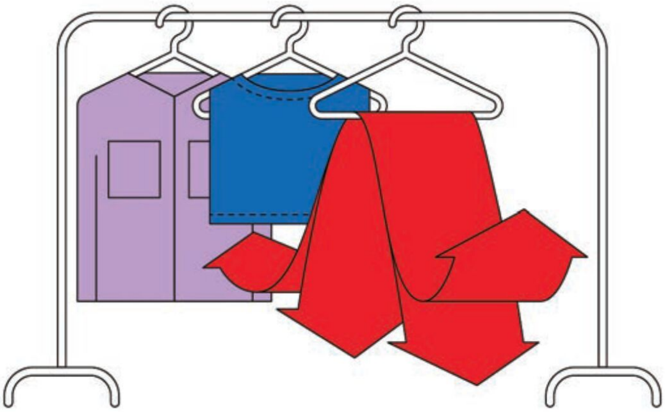


ILLUSTRATION BY ROSE WONG

► Abracadabra

Thousands of buyers, designers and manufacturers from around the world will descend upon the Las Vegas Convention Center on Feb. 13-15 for Magic, the fashion industry's biggest semiannual trade show.

► The UK reports fourth-quarter GDP on Feb. 10. Japan follows suit on Feb. 13. Analysts expect to see a slight contraction for the former and a slight expansion for the latter.

► On Feb. 9, China releases inflation data. Bloomberg economists expect the country's reopening to boost price increases slightly, while remaining well below China's target of 3%.

► The Reserve Bank of Australia sets interest rates on Feb. 6. At its last meeting of 2022, the bank increased the cash rate by 25 basis points, to 3.1%. Analysts say it's likely to raise it again.

► Quarterly earnings calls are scheduled by BP and Vertex on Feb. 7; CVS, Total, Toyota, Walt Disney and Yum! on Feb. 8; AbbVie, L'Oréal, PepsiCo, Siemens and Unilever on Feb. 9.

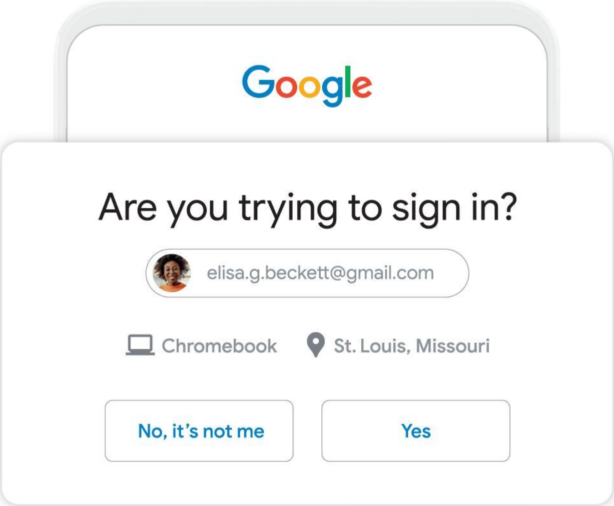
► The Zonamaco art fair, the largest in Latin America, with exhibits of fine arts, photography, design and antiques, runs Feb. 8-12 at Centro Citibanamex in Mexico City.

► The UN's International Day of Women and Girls in Science, on Feb. 11, will focus this year on the role of women and girls in furthering sustainable development.

Google

A weak password is the biggest threat to online security

2-Step Verification was built to secure ✓ your account, even if your password is compromised



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Chromebook
St. Louis, Missouri
No, it's not me
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Facebook Won't Be Trump's Salvation

● The social network has lost its premier position as a shaper of political discourse

● By Joshua Green

LOGAN CYRUS/AFP/GETTY IMAGES

Meta Platforms Inc.'s announcement on Jan. 25 that it will allow Donald Trump back onto Facebook and Instagram—ending his two-year suspension for "acts of incitement" tied to the Capitol riots in 2021—was met with all the expected furor from Democrats.

Representative Adam Schiff of California called Trump's reinstatement "dangerous." In a public letter to Nick Clegg, Meta's president for global affairs, Schiff and Senator Sheldon Whitehouse of Rhode Island slammed the company's decision as "inexplicable" and insisted "his account should not have been reinstated." Most public criticism focused on a concern that Trump could use his 34 million Facebook followers to sow further violence and misinformation. Privately, Democrats fear it could supercharge his 2024 presidential campaign. Many still attribute his upset of Hillary Clinton in 2016 to Facebook-enabled online skulduggery.

Yet for all the controversy surrounding Trump's potential return, Facebook is unlikely to be his salvation in 2024. Much of what made his campaign's use of the platform so innovative and effective has changed, as other politicians caught up and Facebook responded to criticism by cracking down on several of his methods. Experts point out that Facebook is no longer the political weapon it was during Trump's rise, because the platform has chosen to deemphasize politics. "It's not as powerful an organic sharing tool as it was in 2016 or even 2020," says Kyle Tharp, a former political strategist and author of the *FWIW* newsletter, which tracks digital politics.

Trump originally turned to Facebook to raise money and build campaign support because he was widely viewed as a bigot and a gadfly, and reputable Republican fundraisers wouldn't work with him. In 2015 he had the platform more or less to himself and took full advantage of it: Facebook accounted for the bulk of the $250 million his campaign raised online. Today, however, raising money through Facebook is something every politician does continuously—including Trump. Although his personal account was suspended after the Jan. 6 attack, Trump's joint fundraising committee, Save America—his main vehicle for raising political dollars—was permitted to continue raising money on the platform and spent at least $2.2 million on Facebook ads during the period of his suspension. So Trump's return may not produce nearly the windfall some are expecting.

If he does come back to Facebook, his campaign's tools will be limited. As *Bloomberg Businessweek* first reported in 2016, the Trump campaign used Facebook to conduct an extensive below-the-radar operation to discourage infrequent Black voters (presumed to be Clinton supporters) from showing up at the polls, particularly in the pivotal swing state of Florida. The campaign accomplished this through the use of Facebook "dark posts"—nonpublic posts whose viewership the campaign controlled so that, as its digital director Brad Parscale put it, "only the people we want to see it, see it." But the public backlash this behavior drew led Facebook to ban the controversial practice.

The same is true for another method the Trump campaign employed in 2016, when it illicitly harvested the private data of tens of millions of Facebook users without their knowledge or consent. Its secret weapon in this endeavor was a London data mining firm, Cambridge Analytica, that was backed by Robert Mercer, a wealthy Republican donor and hedge fund executive. Trump campaign honcho Steve Bannon was a board member. But the international outcry that arose once these practices came to light led to Cambridge Analytica's banishment from Facebook and, in 2018, its bankruptcy. Today the company's website hosts erectile dysfunction ads.

Trump has been noncommittal about whether he'll return to Facebook, telling Fox News that the company "needs us more than we need them." But most Republicans close to his political operation believe he won't be able to pass up the audience of tens of millions of people that he can now reclaim by returning to Facebook, Instagram and Twitter (whose new owner, Elon Musk, reinstated his account on Nov. 19, although Trump has not yet tweeted). Even while acknowledging that Facebook lacks the reach it once had, some allies of the former president believe his return will nevertheless prove an important difference maker in what could shape up to be a crowded Republican presidential field.

"Trump's ability to speak directly for himself has always been his most powerful weapon," says Matt Oczkowski, the lead data adviser for Trump's 2016 and 2020 presidential campaigns. "His ability to be funny, direct, off-kilter, to speak in his own way, that's always been his biggest differentiator from other Republicans and the thing that voters respond to."

There's no argument from his opponents, Democratic or Republican, that Trump's attention-grabbing antics on social media dominated and shaped the coverage of the last two presidential campaigns. But he faces at least two more hurdles from Facebook in his quest to reprise his role as political ringmaster in 2024.

The first is that marquee conservative personalities like Trump, Tucker Carlson and Dan Bongino don't generate anywhere near the attention they once did, thanks to an apparent algorithm tweak. "Major conservative Facebook pages receive dramatically less organic user engagement than they did just two years ago," Tharp says. CrowdTangle data show that the number of likes, shares and comments are roughly one-tenth of what they were in 2020.

Perhaps a bigger factor for Trump isn't Facebook's treatment of controversial political content; it's TikTok. Like every other social platform, Facebook is scrambling to compete with the Chinese video-sharing app by prioritizing short-form vertical video content, a form Trump has never mastered.

It's possible that he'll manage to adapt and thrive. But if he doesn't, he may wind up as the latest in a long line of entrepreneurs who prospered on Facebook—and then went bust when the company pivoted in a new direction. Ⓑ

Skiing in Japan, Elevated

After decades of minimal investment, one Niseko resort is spending big on new lifts

NISEKO MT.RESORT
Grand HIRAFU
SKI AREA MAP

On a frosty afternoon, Colin Hackworth treks into the backwoods of Japan's Niseko mountain to show off a favorite stash of fresh powder. Dropping down a steep face, he dips into the knee-deep snow, shooting up crystallized plumes as he makes turn after turn through the trees. "There's just nowhere else like this," says the 65-year-old Australian. "When you understand the ski industry, you understand how rare it is to get this kind of abundant, airy powder."

ヤミツキタコス
We're crazy for Tacos

Niseko sits on the western edge of the island of Hokkaido, where Siberian winds sweeping across the Sea of Japan drop heavy snow almost daily during the winter months. The area typically gets at least 10 meters (33 feet) a season—and sometimes more than 15 meters—versus about 3 in France's Courchevel and 6 at Vail Mountain in Colorado.

16
HANAZONO

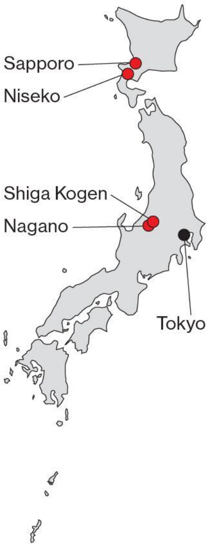
Hackworth is betting on that powder with an investment blitz the likes of which Japan's ski industry hasn't seen in decades. Backed by Hong Kong billionaire Richard Li, his company, Nihon Harmony Resorts, poured more than $500 million into new lifts and a sparkling Park Hyatt hotel during the Covid-19 pandemic. The hotel is now fully booked despite room rates of $1,200 a night, and lift revenue is running more than 30% ahead of pre-pandemic levels. His plan is the exact opposite of what Japan's resorts have done for the past three decades—sticking with outdated infrastructure to keep ticket prices low. "This whole attitude of 'Let's see how cheap we can make skiing' is the wrong business strategy," Hackworth says. "If we invest, people will come. Everybody knows Niseko has the best snow in the world."

Japan's ski areas this season reopened to foreign visitors for the first time since the pandemic started, and the slopes are packed with people ▶

Edited by
James E. Ellis and
David Rocks

◀ Hackworth (in blue) is leading a $500 million investment in lifts and hotels at Hanazono

▼ Japan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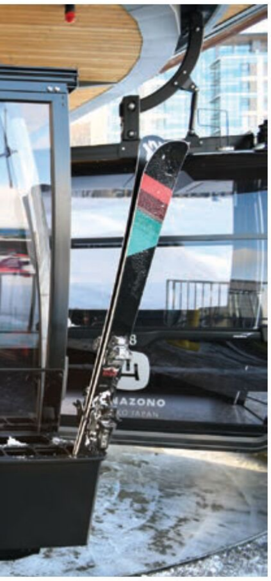


YORIKO HAYASHI/BLOOMBERG

◀ from Australia, Singapore, the US and France alongside many locals. As a weaker yen has made the country about 20% cheaper than it was the last time foreigners were allowed in, a day at Niseko now costs the equivalent of $65, versus an average of $165 at US resorts. Alexander Scott, a 31-year-old Swede, opted to visit Japan rather than Europe, where warm weather has devastated the snowpack. “It’s snowed for three days almost nonstop,” he says, clutching a pair of extra-wide Bent Chetler powder skis.

Japan’s ski industry can reverse a decades-long decline, Hackworth insists. His evidence is Niseko, the country’s most celebrated ski destination, where four areas owned by four companies share a mountain—and sell a common ticket for a total of almost 30 lifts serving interconnected slopes—even as they pursue starkly divergent strategic paths. Nihon Harmony’s side of the peak, called Hanazono, is gaining in popularity as skiers flock to amenities such as a high-speed chairlift with heated leather seats built in 2021. At the other end of Niseko, the Annupuri resort’s gondola, built in 1985, shuts down frequently because of strong winds.

Japan’s ski industry peaked in the 1990s after an economic boom, along with government incentives, sparked the opening of hundreds of areas across the country. In those years, Japanese resorts tallied visitor numbers never seen anywhere before or since. Tourism authorities have high hopes of again attracting hordes of skiing foreigners, but the lack of investment risks undercutting those ambitions. Laurent Vanat, a consultant who tracks skiing worldwide, says aging infrastructure has damaged Japan’s reputation as a global destination. Powder hounds may come from afar for the snow, but they’re often disappointed when they find that the lifts date to the ’80s or ’90s. “The ski industry in Japan did not reinvent itself,” Vanat says.

The company that owns Niseko Annupuri, Hokkaido Chuo Bus Co., exemplifies the conservative approach. The area opened in the ’70s, when the bus company thought tourism could feed into its core transportation business. Today it sees its role as serving people in its community—and keeping prices low. “We are a local company and can’t neglect local needs,” says Takanori Kikui, who heads Hokkaido Chuo’s skiing operations.

Hackworth says it’s time for change. Nihon Harmony, owned by Li’s Pacific Century Premium Developments Ltd., aims to build hotels beyond the Park Hyatt, with a Nikko property rising nearby. And it’s purchased land on a peak adjacent to Niseko where Hackworth is planning more lifts and slopes. To pay for all this, he wants to boost prices—a lot. “Lift tickets need to be 50% higher,” he says over coffee at the Park Hyatt’s China Kitchen restaurant, where a Hokkaido wagyu hot pot for two runs $115. “I don’t think people will object if they understand that new lifts and facilities come with it.”

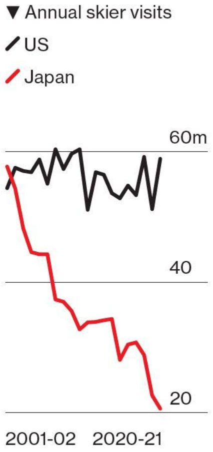
He’s proposing what the rest of the world began years ago. In the US, companies such as Vail Resorts Inc. snapped up ski areas across the country, investing in infrastructure and charging skiers a premium for the improvements. American resorts build more than 20 lifts a year. The number of new lifts in Japan over the past decade? Six. And the industry in Japan is more fragmented than it is in North America and Europe. Two-thirds of Japan’s resorts operate fewer than a half-dozen gondolas and chairlifts, tiny by global standards.

After the 1972 Winter Olympics in Sapporo—about two hours by car from Niseko—skiing soared in popularity in Japan, and resorts became a bustling social scene. With mountains scattered throughout the country and a growing network of bullet trains, almost everyone was within two hours of a resort. “Skiing wasn’t just a sport, it was a way for men and women to socialize when communication was limited without mobile phones,” says Kazuhiko Tajima, owner of Hotel Grand Phenix Okushiga, a Swiss-style chalet in Shiga Kogen, a venue for the 1998 Nagano Winter Olympics.

In the ’90s, Japan had more than 18 million skiers, who racked up a total of almost 100 million days on the slopes—about double the US at the time. Since Japan’s economic bubble burst, the ski population has plunged 75%, to 4.3 million in 2020, and the number of resorts has dropped below 500, from a peak of more than 800; some have fallen victim to climate change, since many stood at relatively low altitudes, topping out at less than 3,000 feet above sea level.

Niseko thrived thanks to foreign visitors, first from Australia and then Asia, Europe and the US. Hokkaido Chuo Bus says Annupuri was profitable before the pandemic. But it’s now struggling to find the cash to revamp its lifts, which can cost anywhere from a few million dollars for a short chairlift up to $35 million-plus for a gondola stretching a mile or more. Resort owners in the US and Europe would tell you such upgrades are worth the trouble. A modern gondola can carry around 3,000 people an hour up the mountain, about five times the capacity of an ’80s alternative, allowing resorts to accommodate more people—and bring in more revenue—without dreaded lift lines. “If a ski area has a good year, they are going to invest a portion of that in new infrastructure,” says Kelly Pawlak, president of the US National Ski Areas Association, who says American resorts spend an average of about

> **“This whole attitude of ‘Let’s see how cheap we can make skiing’ is the wrong business strategy”**



DATA: LAURENT VANAT CONSULTING, US NATIONAL SKI AREAS ASSOCIATION

$15 per skier-day on new facilities and upgrades.

Vail Resorts shows how investment can pay off. The company went public in 1997 and acquired dozens of resorts, ranging from diminutive hills in the Midwest to giants such as Colorado's Breckenridge, Park City in Utah and Whistler Blackcomb near Vancouver. The company steadily raised prices to pay for amenities that keep skiers coming back. A day ticket at Vail Mountain now tops $200, so pricey that many people opt for its $859 Epic Pass, which is valid all season at areas across the US and abroad. Vail is now valued at more than $10 billion. Hokkaido Chuo Bus trades at about $80 million.

Hackworth grew up in Adelaide, a thousand miles from the nearest ski slope. He started skiing only as an adult, but he found he loved it so much he left a corporate job to become a ski bum. In 1994 he was appointed general manager of Mount Hotham, one of Australia's primary ski destinations, and a year later he led a buyout of the resort. He traveled to Niseko for the first time in 2003, about the time Australians began arriving in Japan in substantial numbers. Struck by the relentless snowfall, Hackworth bought Hanazono the following year from railway company Tokyu Group, which had opened the ski area in 1992. Hackworth proposed running the Japanese resort alongside his Australian operation, but the partners back home balked, so he quit to focus on Hanazono.

Seeking outside investors to help pay for improvements, Hackworth ultimately sold out to Li's Pacific Century. Li, whose net worth is about $4.6 billion, according to the Bloomberg Billionaires Index, is one of several foreign investors who see opportunity in Japan. China's Fosun International Ltd. has purchased ski properties in the country, including a facility at Hokkaido's Kiroro resort that it converted into a Club Med. And Malaysia's YTL Corp., led by billionaire Francis Yeoh, owns Niseko Village adjacent to Annupuri.

The Hanazono project has had rocky moments. As the pandemic hammered demand for skiing globally, it disrupted Hackworth's plans for new lifts. When parts arrived in 2020, he had to store them in 150 containers across Japan because the French engineers responsible for overseeing construction were barred from entering. The Japanese government finally agreed to let them come to Hokkaido in 2021 after Hackworth promised to ensure they would comply with rigid quarantine controls.

As the only part of Niseko that's running ahead of pre-pandemic levels, Hanazono has a financial advantage over its neighbors. When any of the four corporate owners sells a Niseko United pass that allows skiers to go anywhere on the mountain, they split the revenue based on the number of times skiers ride their lifts. So Hanazono is taking an increasing portion of Niseko sales while the other three owners lose share. Even so, Hackworth says a Vail-like consolidation is unlikely as the other three owners appear to have little interest in selling.

Instead, Nihon Harmony has acquired land on Weisshorn, an imposing peak just north of Niseko, which Hackworth plans to build out and link to Hanazono with a gondola that will run more than 2 kilometers (1.2 miles). By 2030 the bullet train network will extend to the town of Kutchan, a short distance from Hackworth's two resorts, which he hopes will make his properties the center of gravity for Niseko skiing. It's a good business, he says, but just as important, he's simply realizing a dream from his days as a ski bum Down Under. "The real reason I do all this," he says, scampering up a snowy slope in search of more powder, "is that I just love to ski." *—Peter Elstrom and Kanoko Matsuyama, with Kurumi Mori and Isabella Steger*

THE BOTTOM LINE With its prodigious snowfalls, Hackworth says, Niseko can be a world-class resort. It just needs lifts that are as good as the powder, and building them means raising prices.

The Next Abortion Target: Drugstore Chains

● Now that *Roe* has fallen, activists are attacking pharmacy operators that plan to sell pregnancy-ending pills

Annual meetings are usually mundane affairs, full of auditors' reports and PowerPoints about a company's financial condition. But the Jan. 26 gathering of Walgreens Boots Alliance Inc. shareholders at a resort in Newport Coast, California, was anything but ordinary, after a group of about 80 anti-abortion activists with the organization Live Action showed up to protest the company's decision to distribute pills used to terminate a pregnancy. A small number of protesters—including two from a different anti-abortion group who said they'd hidden for nine hours in a closet near the meeting room so they could "let them know blood will be on their hands"—burst from behind the podium while others wielding signs demonstrated outside the venue's gates. Walgreens, which had set aside an area outside for protesters, said it was grateful no one was hurt during the "disruptive actions." ▶

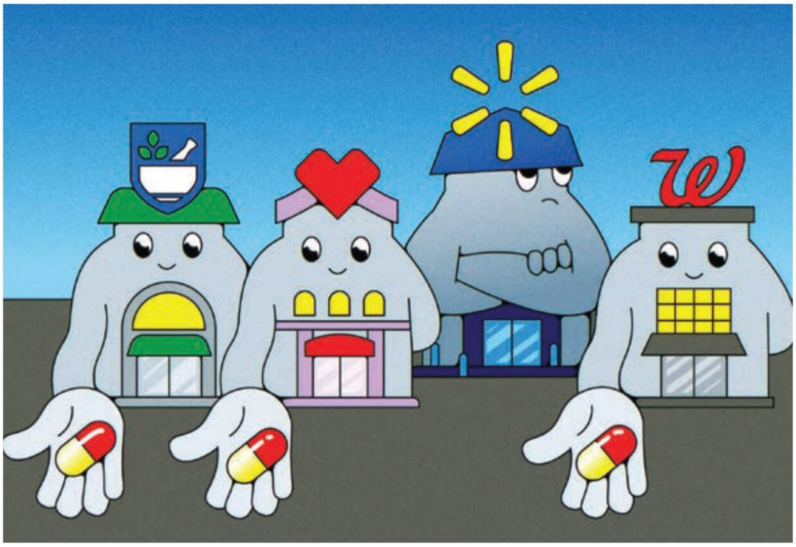
◀ Although the outburst was unusual, it certainly won't be the last. Almost 100 protests across the country are slated for Feb. 4 by the group Progressive Anti-Abortion Uprising, against drugstore operators CVS Health Corp., Rite Aid Corp. and Walgreens, which all plan to fill prescriptions for abortion pills in states where they're legal. "We were hoping to get maybe 30, but it's been very popular," says Caroline Smith, a spokesperson for the group. Students for Life, another anti-abortion group, is planning a Valentine's Day demonstration at Walgreens headquarters outside Chicago. The organization has also declared March 4 a day of protest against the three major pharmacy chains planning to dispense the medicines.

Big drugstore companies are on the front lines as the pills, authorized by the Food and Drug Administration to terminate a pregnancy within 10 weeks of a person's last menstrual cycle, become a new battleground in the abortion-rights fight. Retailers shy away from culture-war issues when they can. But with the uproar that followed June's Supreme Court ruling overturning *Roe v. Wade*, the 1973 decision that established a constitutional right to abortion, it's been hard for them to stay in the shadows. "They realize that if they're going to be a pharmacy for modern times, they have to be able to provide this type of access," says Jessica Nouhavandi, co-founder of Honeybee Health Inc., an online drug delivery service, which this year earned the first permanent certification to dispense abortion pills.

In January, the FDA ruled that brick-and-mortar pharmacies for the first time will be able to dispense the pills, if they apply for and receive a certification not required for most drugs. Not every major drugstore operator is rushing to be approved. Kroger Co. says it's reviewing the updated FDA guidelines. Walmart Inc. declined to comment, but the company won praise in late January from abortion opponents at the Family Research Council, an activist group that advocates a "biblical worldview," for not pursuing FDA certification to carry the medication.

Mifepristone, a chemical in the pills, ends pregnancies by blocking progesterone, a hormone that helps create the conditions for a fertilized egg to become implanted in the uterine lining. When combined with misoprostol—a drug that causes contractions that empty the uterus—it's effective more than 95% of the time in early pregnancies. So-called medication abortion accounts for 54% of all abortions in the US, according to preliminary 2022 data from the Guttmacher Institute, a research organization that backs abortion rights.

Walmart, the largest US retailer and one of the nation's five biggest pharmacy operators, lagged behind rivals in responding to the Supreme Court ruling last year; it ended up modestly expanding its workers' limited abortion access, available through its health insurance. The company also said it would pay for employee travel to receive such care when necessary. Walmart is based in Arkansas and has its largest store count in Texas. Both states have adopted strict abortion bans.



Even pharmacies willing to distribute abortion pills are limited by a patchwork of state laws. Currently, 29 states require clinicians who administer medication abortion to be physicians, according to the Guttmacher Institute. Two states prohibit the use of abortion pills starting at a specific point in pregnancy. And 18 states require a clinician providing a medication abortion to be physically present when the pills are administered, prohibiting the use of telemedicine to prescribe them.

CVS, Walgreens and Rite Aid have said they'll dispense abortion pills where legally permissible, but the FDA's authority to regulate mifepristone is already being tested. Anti-abortion legal advocacy group Alliance Defending Freedom filed a lawsuit in November arguing that the agency was wrong when it approved mifepristone decades ago.

It all suggests big drug chains are going to remain in the hot seat over abortion pill access. "On the margin, I would expect regional players to align with the social norms and statutes of their state while the national chains try to work their way through this issue delicately with a goal of limiting additional controversy," says Bloomberg Intelligence analyst Jonathan Palmer. But given the deep divide in the abortion-rights debate, that'll be no easy task. —*Fiona Rutherford and Brendan Case*

● Share of US abortions performed with medication

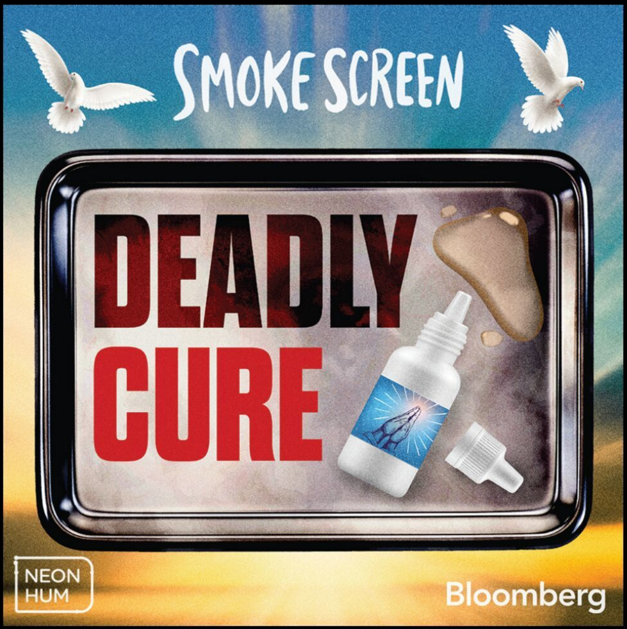
54%

THE BOTTOM LINE Abortion medications have become a target of protesters. Almost 100 demonstrations are planned in coming weeks against drugstore chains that supply such pills where legal.

ILLUSTRATION BY EMMA ERICKSON

A church sold a 'miracle cure.' It was bleach.

The true story of a family that used faith to sell poison—and the people who fought to take them down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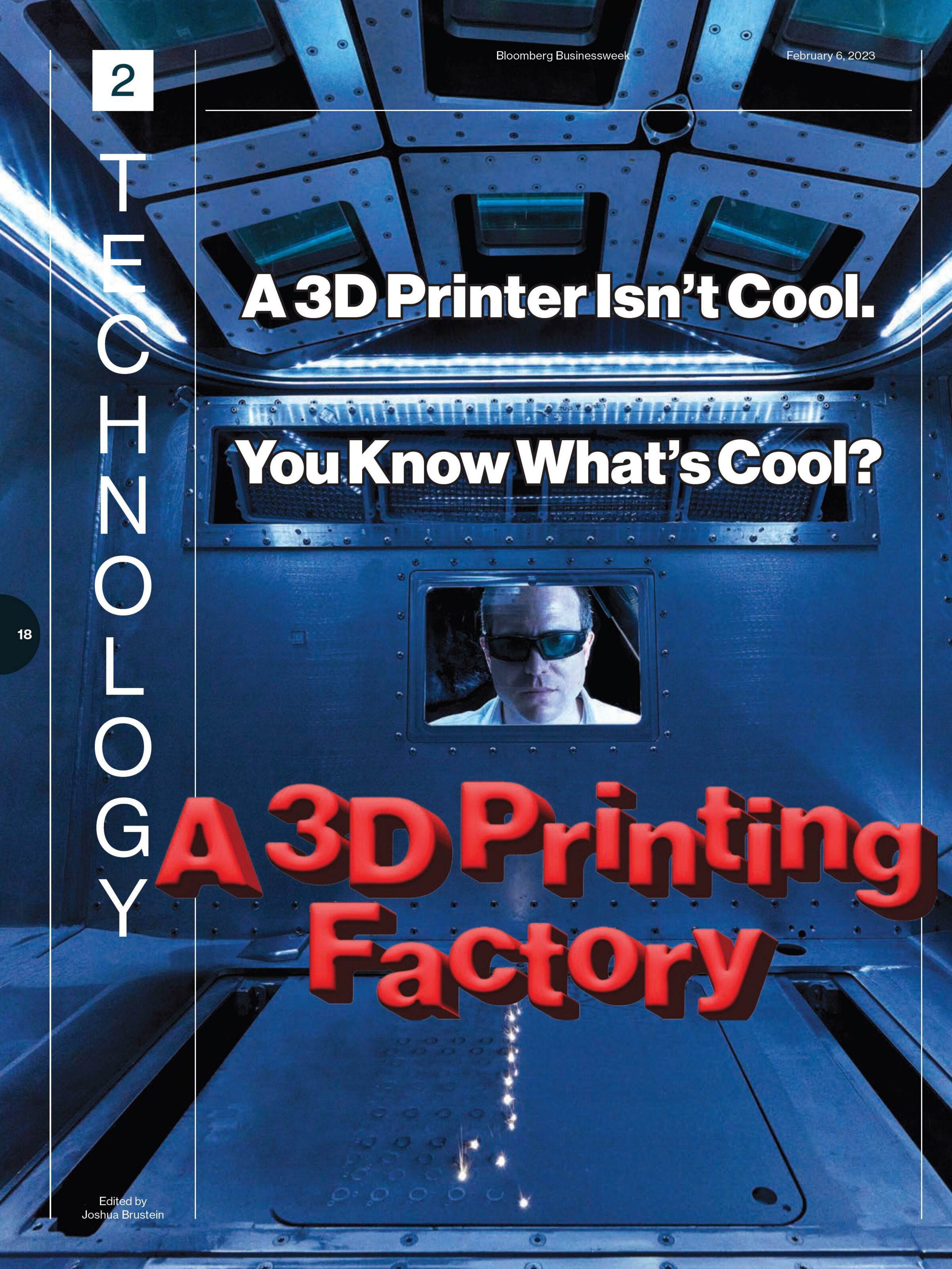


A 3D Printer Isn't Cool. You Know What's Cool? A 3D Printing Factory

Edited by
Joshua Brustein

● SpaceX veterans aim to realize the potential of a technology whose big promises have never quite come through

Since it first began to receive mainstream attention about 15 years ago, 3D printing has had a magical air to it, holding out the promise of turning every home into a miniature manufacturing hub while simultaneously upending the way industrial-scale factories operate. But 3D printers—which create objects by layering materials according to a plan sent by a computer—have gained a reputation for being unwieldy, expensive and slow. The utopian dream of the printers becoming a household appliance as ubiquitous as the personal computer has largely faded.

There has been more progress on industrial uses, though there, too, major players have fallen into a multiyear funk. Venture capitalists continue to dedicate significant resources to startups promising innovations to fix the technology's underlying flaws. One particularly radical approach comes from Freeform Future Corp., a five-year-old startup based in Los Angeles. The company has raised $45 million so far from investors including Founders Fund, Threshold Ventures and Valor Equity Partners.

Instead of trying to build a single machine that can print three-dimensional objects, Freeform is looking to turn entire buildings into automated 3D-printing factories that would use dozens of lasers to create rocket engine chambers or car parts from metal powder. The company, which has never before discussed its approach publicly, says the technique could allow it to make metal parts 25 to 50 times faster than is possible with current methods and at a fraction of the cost.

Freeform's co-founder and chief executive officer, Erik Palitsch, spent a 10-year stint at Space Exploration Technologies Corp., Elon Musk's aerospace company. SpaceX has famously pushed the limits of 3D printing in its rocket engines, and Palitsch led a number of its highest-profile engine development programs. But he says both he and Musk knew the existing 3D printers were inadequate for the company's most ambitious efforts. "When we told Elon how much the machines would cost for some of our new projects, he nearly lost his mind," Palitsch says. "And it always took an army of people to operate them."

In late 2018, Palitsch and fellow SpaceX veteran Thomas Ronacher started Freeform, hoping to rewrite some of the fundamentals of 3D printing. Typically, an object or a few objects are printed at the same time inside a shed-size machine. While it can make just about anything, the amount of work this kind of printer can do is limited by its size and its printing area.

Freeform, on the other hand, is creating machines that can fill a warehouse. Its current factory, in Hawthorne, California, used to serve as Keanu Reeves's motorcycle storage facility. (Freeform still ends up with some of the actor's mail.) Inside, machines shuffle objects back and forth along rapidly moving conveyors, so the system can work on many things at once. Other companies have set up multiple printers in a single facility, but this strategy doesn't improve their speed, it just increases scale by having them work in parallel. Freeform, by contrast, is redesigning the process by which 3D printing can turn raw materials into finished products. In a sense, it's akin to the establishment of the assembly-line process pioneered by 20th century industrialists like Henry Ford. "We have to achieve a state of mass production to open this up to more industries," Palitsch says. "And you simply can't get there with a conventional machine."

Freeform's backers are focused on the industrial realm rather than home-based production. "The main thing they will be able to do is get the price of this down to where it's more like automotive manufacturing costs instead of aerospace costs," says Tom Mueller, who led SpaceX's engine development for many years and is an angel investor in Freeform. "They also just get the printing speed up by a huge amount."

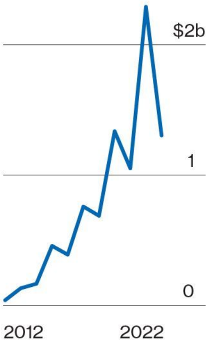
3D printers create objects from a range of materials, including plastics and metal. Freeform specializes in the latter, using a well-known approach where a laser fires onto a bed of metal powder to fuse it into specific shapes. A new layer of powder is then applied, and the laser fires again, and again.

A typical 3D printer today might have two to four lasers and concentrate them on a single metal plate where it builds objects. The lasers hit the metal powder, then cease firing while a new layer of metal powder is placed on the plate before firing again. A limiting factor is the rate at which metal and plastic melt and fuse. Typically, the printer has to take breaks because it also gets too hot. Companies consider it a success if a 3D printer is operating 60% of the time.

Freeform aims to significantly reduce downtime. It has two parallel conveyor systems lined up with multiple metal plates traveling along them. Its 18 lasers fire nonstop while conveyors ▶

◀ Palitsch

▼ Venture funding for 3D-printing companies



PHOTOGRAPH BY SPENCER LOWELL FOR BLOOMBERG BUSINESSWEEK. DATA: CRUNCHBASE

◀ move plates in and out of the beams. Tasks like applying fresh metal powder to a plate or polishing the edges of a part take place in other areas of the machine, leaving the lasers to continue doing their work on other objects. A combination of cameras snap images at more than 70,000 frames per second, feeding the data into computer vision algorithms that orchestrate how the lasers fire. Where a standard machine can fuse about 100 grams (3.5 ounces) of metal powder an hour, Palitsch says Freeform does 5 kilograms an hour now and will do even more soon with new versions of its technology.

While the extra speed and lower price are bonuses, the real value of Freeform's system is how it monitors objects during the printing process, according to Nick Doucette, chief operations officer at rocket engine maker Ursa Major Technologies, which has tested Freeform's technology. 3D-printed parts can have flaws, and customers tend to use antiquated, manual practices to check how strong and solid the final objects are. Freeform uses its host of sensors, scanners and artificial intelligence software to assess quality and can make adjustments while something is being built. "The usual way we do this is a nightmare of testing samples and tweaking things," Doucette says. "Freeform just prints something and gives it to me."

As has so often been the case in the industry, Freeform's current machine has seemingly revolutionary potential but also a short track record and just a few paying customers. It still has a mad scientist prototype quality to it, with all manner of tubes and electronics hanging off its body. Nor is it as big or as automated as the company envisions for more developed products. For the technology to be a real breakthrough, Freeform will have to prove that its machines operate quickly and cheaply enough to open 3D printing to a wide range of new markets and to tackle traditional mass manufacturing head-on.

The end goal, says Palitsch, is to have more lasers and more conveyors, adding up to a system of printers that can fill a 100,000-square-foot building. Jobs that typically take weeks will be done in hours, and few, if any, humans will be involved. "It'll be a fully autonomous printing factory," he says. —*Ashlee Vance*

THE BOTTOM LINE Freeform, a Los Angeles-based startup, looks to overcome industrial 3D printing's historical shortcomings by operating numerous machines as a single system.

◀ An engineer observing Freeform's 3D printer at the company's headquarters

FROM LEFT: PHOTOGRAPH BY SPENCER LOWELL FOR BLOOMBERG BUSINESSWEEK. PHOTOGRAPH BY DANIELA G. MALDONADO FOR BLOOMBERG BUSINESSWEEK. DATA: INSIDER INTELLIGENCE

Twitch en Español

● Spanish-language content has taken off on the gaming-focused streaming service

Samantha Rivera was studying engineering in Mexico in 2020 when a group of friends convinced her she could draw an audience by streaming herself playing *Call of Duty*, the video game she played in her spare time. Rivera set up channels on Amazon.com Inc.'s livestreaming service Twitch, which caters to gamers, and Alphabet Inc.'s YouTube and Facebook Gaming. They took off so quickly that she soon began to question whether she should really devote so much time to her studies.

"The first time I told my parents I wanted to drop out, they said I was nuts," says the 24-year-old, who goes by the name "Rivers_gg" online. But her channels, where she plays video games, laughs at memes and watches soccer, continued to grow. "I kept studying for a semester, and after I said I couldn't do both things, they understood," she says. She's now one of the top 100 most popular Twitch streamers in the world, according to TwitchTracker, streaming almost every day for an average audience of about 19,000 live viewers.

Rivera's success comes amid a broader spike in interest in Spanish-language streaming on Twitch, which says it's the fastest-growing language on its service. From 2019 to 2022, the audience for Spanish-language Twitch livestreams increased sixfold, and Spanish shot up from the seventh-most-watched language category on the site to the second, behind English.

Most of the world's Spanish speakers live in Latin America, which has more than its share of gamers: About 80% of people aged 10 to 65 in

● Rivera

developed residential areas play video games, according to analytics firm NewZoo, whose data focused on Argentina, Brazil, Chile, Colombia and Mexico. But Latin America has never been a major revenue source for social media companies, largely because it lacks a strong digital advertising market. The region has among the lowest digital advertising spending in the world, according to Insider Intelligence. There's also little of the economic infrastructure that has allowed digital content creators in such places as the US to make a living from sponsorships and other businesses.

This poses a challenge to Twitch, which makes revenue through a combination of advertising and taking a cut of the fees viewers pay to subscribe to specific channels. It also makes it harder for streamers like Rivera, who has about 7,700 paying subscribers, according to analytics service TwitchTracker, but didn't give specific details about her income in an interview with *Bloomberg Businessweek*.

Ana Martins, a partner at Brazil-based venture capital firm Atlantico, describes the market for social media influencers in Latin America as nascent. "Despite their influence, creators struggle to monetize," she says. "As we think about the coming decade, there is so much value to be created in the region's creator economy."

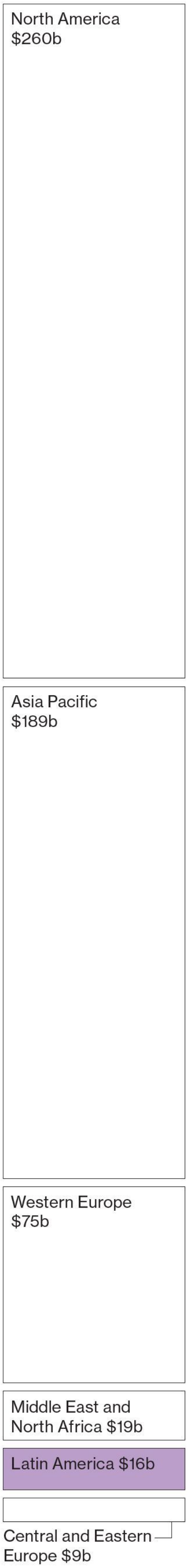
Twitch was founded in 2011 in San Francisco and in 2014 hired Ignacio Estanga, now its vice president for Latin American partnerships. Streamers in the region at the time complained that Twitch didn't translate pages into Spanish and lacked tools to help fans discover their content or donate to them in their local currency, says Estanga, who now works from the company's Mexico City office. In the past couple of years, Twitch has ramped up its presence in the region by increasing its staffing there, adding marketing, creator partner and sales teams. (It declined to say how many people it employs in Mexico.) Twitch has also added servers to support livestreaming operations and in-app features for tagging and discovering Spanish-language streamers.

The emergence of Spanish-language Twitch has been marked by the rise of a few big stars, who often devote considerable effort to promoting their ostensible rivals, appearing on one another's channels and replaying other streamers' content for their audiences. At times, they rely on a spectacle that's become peculiarly popular on Twitch: the influencer-on-influencer boxing match. In June 2022, Spanish streamer Ibai Llanos Garatea, Twitch's fourth-most-watched celebrity, assembled a lineup of popular Spanish-speaking content creators and had them face off in a boxing ring. The event drew 3.4 million concurrent viewers to a single livestream—the largest such audience the service has ever seen on a single livestream. On Jan. 29, a Twitch influencer held an awards show for Spanish and Latin American streamers that drew 1.7 million people to the platform, the third-largest live audience in its history.

As the audience builds, creators like Rivera say they've begun to feel that some of their viewers object to the idea of social media influencer as a job category. Poverty is common in Latin America, and in Mexico, Rivera says, hard work is held in high cultural esteem—and some of her viewers seem to think video game commentary doesn't count. Osvaldo "ElMariana" Flores, who boasts 6.4 million followers on Twitch, says he gets a small but steady stream of criticism. In the US, he says, Twitch streamers' fans might express support and admiration when they show off a new car or house. In Mexico, "this kind of life is not accepted yet." —*Cecilia D'Anastasio*

THE BOTTOM LINE The newfound popularity of Spanish content on Twitch could help spur the development of a US-style social media influencer economy in Latin America.

▼ Digital ad spending, 2022



How Stockpickers Steer Through Storms

● The bear market has made active managers look good—so far

For one type of investor, 2022 was the best year in a long time. A large number of active managers of equity mutual funds—the ones who select specific stocks rather than track an index—beat the S&P 500.

Measuring the relative performance of fund managers is trickier than it sounds, so not all the data are in. (Number crunchers have to decide which index each fund can be fairly compared with.) But early indications show that a key group of stockpickers eked out an edge. According to an analysis by advisory company Strategas Securities, 62% of active large-company "core" funds—those that buy a mix of growth and value stocks—beat the market. That's the highest percentage of active portfolios to notch a win since 2005.

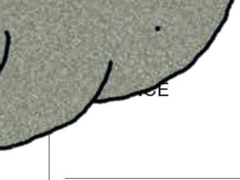
Similarly, an analysis by S&P Dow Jones Indices, which compiles a widely followed scorecard of active versus passive funds, showed that almost half of a broader universe of large-cap active funds topped their benchmark in the first half of 2022, compared with a long-run average of only 35%. Final 2022 figures are still in the works, but "if the whole year came out that way, it wouldn't shock me," says Craig Lazzara, managing director of core product management at S&P DJI. Most managers still lost money, but as the S&P 500 index tumbled almost 20% last year, a lot of them found ways to at least limit the damage.

This development seems to affirm a favorite marketing line of fund companies: When times get tough, active management shines. Even a 50-year proponent of index investing, Princeton emeritus professor of economics and *A Random Walk Down Wall Street* author Burton Malkiel, acknowledges that "there has been a tendency for active to underperform somewhat less in declining markets."

Still, stocks have more up years than down ones, and such bright moments for active managers have

Edited by
Pat Regnier

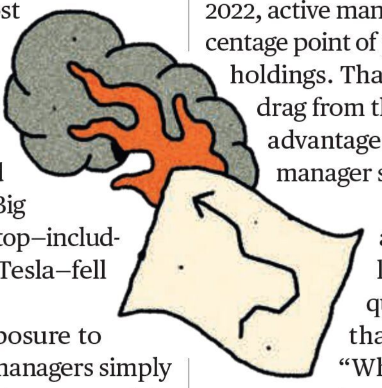
ILLUSTRATIONS BY PHILIP LINDEMAN



tended to be few and brief. "In the 21 complete years for which we have data, the majority of large-cap managers outperformed the S&P in three years. The last one was 2009," Lazzara says. It's not necessarily that managers are bad at their job. Fund fees (a typical 0.63% of assets per year for active equity funds versus 0.08% for index funds) drag returns down. So they have to be above-average before costs to have a shot at even being average.

In times of disruption, though, professional investors can sometimes find themselves on the right side of a new trend. In the bullish decade prior to 2022, the simplest way to make money was to keep riding the same winning stocks, something that index funds do automatically. But the past year saw an abrupt shift from bull to bear and from high-valuation growth companies to bargain-price value stocks. "Essentially, the buildup to valuation bubbles favors passive, and the popping of those bubbles favors active," says Scott Opsal, director of research for the Leuthold Group, an investment researcher.

By August 2020, the five largest companies by market value accounted for almost 25% of the S&P 500, the highest concentration in top names since at least 1980, according to data from Goldman Sachs Group Inc. Concentration stayed high and finally bit index investors in 2022. Big tech names that tend to be near the top—including Amazon.com, Microsoft and Tesla—fell hard last year.



Active funds often had less exposure to these names. "The fact that many managers simply do not hold the top 5 companies at the same weight as the [S&P 500] has been accretive to portfolio performance" in 2022, the Strategas report found. That may be partly the wisdom of managers, but there were also institutional factors. Many active funds have limits on what percentage of assets they can hold in one stock or one sector, so they can't mirror the makeup of an index that comes to be dominated by a handful of stocks even if they want to.

Also, even those funds that buy a broad mix of stocks may have had a stylistic tilt toward value investing that helped them as tech stocks were punished. "When most people talk about indexing, they're thinking of the S&P 500 or the total stock market index," says William Bernstein, an investment writer and co-founder of Efficient Frontier Advisors. In years when value does better, some active managers have an improved chance of beating those two broad benchmarks. But the same can be said of the many index funds that track value stocks. For example, the Vanguard Value ETF fell only 2% last year. It tracks an index of about 350 stocks that are cheap relative to their earnings, sales or assets, and it lists conglomerate Berkshire Hathaway Inc. as its biggest holding.

Another reason active funds may outperform passive index funds at turning points in a market has to do with cash reserves, Malkiel says. Both active and index funds keep cash on hand to meet client redemptions. But to accurately track their benchmarks, index funds generally use futures contracts so that the fund remains effectively fully invested at all times. Thus a declining market hits 100% of an index fund, but if an active fund has 5% in cash, only 95% of the portfolio is dragged down.

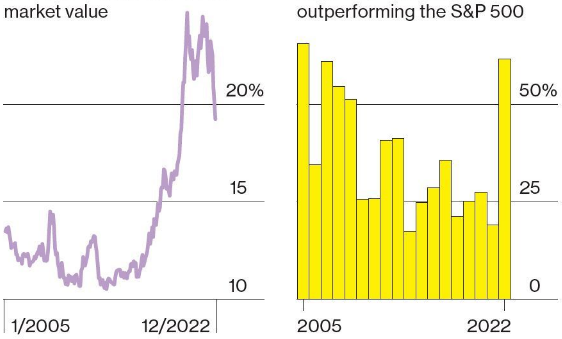
Bryan Armour, director of passive strategies, North America, for Morningstar Inc., gives an example of how that cash difference would play out for the average active stock fund holding 3% of its portfolio in cash versus the media passive exchange-traded fund holding 0.19%. With the Russell 1000 index of the biggest companies losing about 19% in 2022, active managers picked up an extra half a percentage point of performance by virtue of their cash holdings. That's almost enough to wipe out the drag from the funds' typical fees. "That's a big advantage that is unlikely to be explained by manager skill," Armour says.

Even if you think active funds' advantage as a group last year is likely to repeat, you face another question: How do you pick the one that's most likely to outperform? "When you find a manager who is above average in a particular year, that does not predict whether they will be above average the subsequent year," says S&P DJI's Lazzara. Lazzara reads the data as an argument for sticking by indexing, but Strategas takes a different ▶

Active Funds Stood Out in a Top-Heavy Market

Five largest companies as a share of the S&P 500's market value

Share of actively managed large-cap core funds outperforming the S&P 500



DATA: GOLDMAN SACHS GROUP, STRATEGAS SECURITIES

◀ lesson from its numbers. Its report notes that 2022 was the best year since 2010 for an index that equally weights each stock, when compared with the S&P 500 index, which weights stocks by market value. In other words, a large number of stocks did better than the biggest, most popular ones. Something similar happened in the wake of the dot-com bubble, and Strategas argues that as the pandemic fades and interest rates rise, stockpickers may have a better shot of outperforming as the market shifts away from what worked in the recent past.

A more basic takeaway is that a seemingly plain-vanilla index such as the S&P 500 is still plenty risky, and choosing to index isn't the end of your important portfolio decisions. Investors who find an S&P 500 index fund more volatile or growth-focused than they'd like can look for passive funds with a value tilt, which still have a cost advantage over active. Besides funds that specifically track bargain-priced stocks, there are funds that hold stocks in equal weightings or that weigh by factors such as price, dividends or earnings consistency rather than sheer size. But anyone who was shocked to see their index fund lose 20% could also consider a slightly lower weighting in equities overall.

Indexing doesn't always win; it simply has better odds most of the time. Even in volatile markets, that's probably enough if you also have an asset allocation plan you can stay with. —*Suzanne Woolley*

THE BOTTOM LINE An unusual number of active fund managers did better than the S&P 500 last year, but indexing still has the advantage in the long term.

This ETF Changed Everything

● The SPDR S&P 500 was built for traders, but it democratized investing along the way

Few champions can stay on top forever—even the ones who virtually invented the game. On Jan. 29 the SPDR S&P 500 ETF Trust turned 30. With $397 billion in assets, it's the biggest exchange-traded fund on the planet, but competition for the No. 1 spot is getting fierce.

Known by everyday investors and pros alike by its ticker symbol, SPY, the fund simply tracks the S&P 500 index of the largest US public companies, for a modest fee of 0.095% of assets per year. It's the go-to product especially for institutional money managers who want a fast and dependable way to hop in and out of the market. But other ETFs follow the same index at a third of its expense ratio and have become a magnet for everyday investors. In the past year, BlackRock Inc.'s $307 billion IShares Core S&P 500 ETF and the $279 billion Vanguard S&P 500 ETF have added tens of billions of new assets while SPY posted outflows.

Even if SPY is overtaken, its place in history is secure. It wasn't technically the first ETF—that distinction belongs to a Canadian product—but it was the first in the biggest stock market when its shares began trading in 1993 under the original name Standard & Poor's Depositary Receipts, or "spiders." In an echo of its challengers today, the new fund upset plenty of established businesses.

First and foremost, it was a passive index fund. In the early 1990s, they were still fairly novel—and accounted for less than 2% of US fund assets, according to Investment Company Institute data, compared with almost half today. The late Vanguard founder Jack Bogle was evangelizing the virtues of low-cost indexing, but the biggest stars of the mutual fund business were the stockpickers at places such as Fidelity Investments, T. Rowe Price and Franklin Templeton. Investment products commonly carried hefty upfront sales commissions to compensate the brokers who hawked them, and equity funds carried average annual expenses of more than 1.4%.

The ETF was also a totally new way to buy funds. Investors in mutual funds could get in and out only once per day, at a price reflecting the value of the portfolio at the close of the market. People often mailed checks to fund companies to get their shares. But SPY, developed by the American Stock Exchange and State Street Global Advisors in Boston, could be traded instantly like a stock by anyone with a brokerage account. Investors could even short it—that is, bet on its price falling. Making all this work wasn't simple. Specialized traders would have to step in to make sure the price of SPY's shares more or less matched the value of its portfolio of stocks; they'd make money by exploiting the tiniest gaps in prices. This is still how ETFs operate today.

Jay Baker was vice president of options marketing at the American Stock Exchange at the time of SPY's introduction and was given the job of drumming up business for the ETF. On one call, a broker-dealer said he loved and owned the product but hoped Baker would fail, and said he wasn't welcome in the office anymore. "As far as I'm concerned, that was the turning point, the hostility of that phone call," Baker says. "I said, 'This is gonna be successful because we never get a reaction like that.' " It was a threatening product, he says, because many firms sold S&P 500 portfolios to clients for a much higher fee.

Small investors didn't immediately switch from mutual funds to ETFs, because brokerage costs on each trade could swiftly eat into small incremental investments. But as online trading became commonplace and commissions plunged toward zero, ETFs eventually became the quickest and easiest route to a diversified portfolio. Vanguard introduced its own ETFs, and BlackRock acquired the manager of the IShares ETF line to become the biggest asset manager in the world. Today there are about 3,000 US-listed ETFs and counting, and the competition has helped pull down costs everywhere. Fidelity, the home of some of the 1990s' hottest active funds, now sells some traditional index mutual funds with a doorbuster expense ratio of 0%.

"Think about what ETFs have done for investors over the last 30 years," says Jillian DelSignore, head of adviser sales at fintech platform FLX Networks and an ETF industry veteran. "It's provided access. It's democratized that access for so many different types of exposures. And SPY was No. 1."

Mutual funds as an investment class have posted net outflows for five years straight as ETFs gain assets. Seeing the writing on the wall, almost every major Wall Street player now offers the newer structure, and some are even converting mutual funds into ETFs. Once a synonym for passive investment, ETFs today include a number of actively managed funds. Cathie Wood's ARK Innovation ETF, a concentrated portfolio of high-risk tech bets, became the avatar of the pandemic-era stock boom and bust.

Inevitably, the industry's explosive growth has brought with it missteps, risky products and controversy. In addition to the supercheap index funds tracking plain-vanilla equities and bonds, there are ETFs and related products such as exchange-traded notes offering space exploration and cannabis stocks, leveraged bets on market declines and even wagers on the sheer volatility of markets. Regulators have expressed concern that complex products are leading investors into danger.

Their incredible cash inflows—in particular to the huge passive vehicles—have even stoked concern about how ETFs may be affecting trading, as investors automatically pile into the same assets. Indexing proponents point out that there are still plenty of active traders to make sure that prices reflect new information and sentiment. Meanwhile, BlackRock, State Street and Vanguard have become top shareholders in most major American companies, raising questions about the power of fund companies in proxy votes.

One reason SPY is facing competition for the title of biggest ETF is the democratization of investing that it kicked off. Much of the money pouring into BlackRock's and Vanguard's S&P 500 ETFs comes from retail investors. That includes investments via so-called model portfolios—off-the-shelf strategies containing ETFs and mutual funds that are mass-marketed by advisers.

SPY has one remaining advantage, and it's a big one: how much it trades. Buy-and-hold investors want the lowest fees, but there's another group of traders who need to move faster and who don't hold their ETFs as long. Institutions making tactical adjustments frequently turn to SPY because its shares are so liquid, meaning for every seller there are more buyers and vice versa, and the spread, or transaction cost, on each trade is much narrower, which is more important to them than the annual expense of the fund.

All these factors make SPY the most traded security in the world, with average daily volume of $39 billion. It's the tool of choice for short-term portfolio adjustments, and its volume can explode at times of crisis. When Covid-19 struck in 2020 to trigger broad market panic, it was the first ETF in history to trade $100 billion of shares in a day. In an era of declining liquidity, this means that even if it loses the asset crown, SPY can reign among traders for years to come.

"People are confident it will be there," says Reggie Browne, the co-global head of ETF trading and sales at trading company GTS. "You have 30 years of empirical evidence of how SPY has behaved." *—Katie Greifeld and Sam Potter*

THE BOTTOM LINE The first US ETF is still the biggest one, too. Although lower-cost rivals are coming for its crown, SPY remains the default choice for professionals who want to trade the S&P 500.

▼ US exchange-traded funds

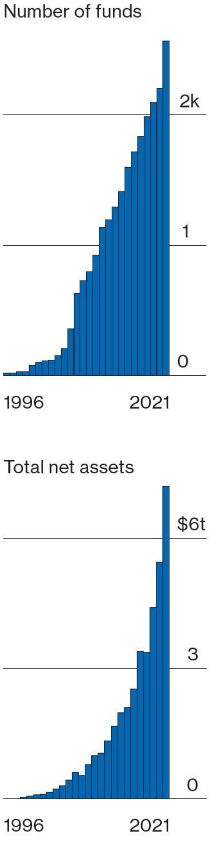


PHOTO ILLUSTRATION BY 731; PHOTOS: ALAMY (3). DATA: INVESTMENT COMPANY INSTITUTE, STRATEGIC INSIGHT SIMFUND

Fighting The Fed

● Wall Street wants lower rates. Powell says not yet

There was a time not too long ago when traders were betting the Federal Reserve would start cutting interest rates at its Feb. 1 policy meeting. This was in the summer, when one of those periodic bouts of euphoria was sweeping across markets because, the cognoscenti had determined, inflation would quickly subside and pave the way for the Fed to shift its focus to shoring up growth.

That didn't pan out, of course. Instead, the central bank's rate-setting committee nudged up the benchmark by a quarter point, the eighth straight increase since March but also the smallest.

Traders were forced to capitulate months ago and have pushed back their calls for a rate cut to July at the earliest. Yet much of that same inflation-is-about-to-melt-away good vibe has taken hold of markets once again, sparking sharp rallies in the new year in stocks, corporate bonds and cryptocurrencies. Even coins tied to disgraced mogul Sam Bankman-Fried are soaring.

For some observers, there's a nagging sense that they're watching a movie playing on a never-ending loop, as investors breathlessly push up asset prices in anticipation of a pivot in Fed policy, only to get crushed when Chair Jerome "Jay" Powell and his lieutenants remind them it's too soon to proclaim that inflation has been vanquished. Last year was brutal for investors of all stripes, and those who bet big on ephemeral rebounds were in many cases burned worst of all.

"I've spent enough time around Wall Street

ILLUSTRATION BY DEENA SO OTEH. *DERIVED FROM INTEREST-RATE SWAPS LINKED TO FED MEETING DATES AND FROM SECURED FINANCING-RATE FUTURES. AS OF JAN. 30, 2023. DATA: CHICAGO MERCANTILE EXCHANGE, COMPILED BY BLOOMBERG

Edited by
Cristina Lindblad

to know that they are culturally, institutionally, optimistic," Neel Kashkari, the president of the Minneapolis Fed and a former investment banker and trader, told the *New York Times* recently. He had a warning for investors, too: If they doubt the central bank's resolve to properly finish the job on inflation, even at the cost of putting millions of Americans out of work, they are mistaken. "They are going to lose the game of chicken, I can tell you that," he said.

Kashkari's cautionary words underscore a key point about the latest rally: It's not helping the Fed quell inflation. Higher stock and bond prices are making millions of Americans wealthier while also making it easier for companies to raise fresh capital they can spend on factories and equipment and new hires. That may be great in normal times, but when inflation is still enemy No. 1, anything that could stoke additional demand in the economy and further drive up prices is frowned upon in the halls of the central bank.

"The Fed is grappling with a market that doesn't believe them, and so I think you have to think of the Fed as performative," said Jason Brady, president and chief executive officer of Thornburg Investment Management, in a Jan. 25 interview on Bloomberg Television. In other words, expect more tough inflation-fighting rhetoric from Powell and the other members of the rate-setting committee. "What they're saying is what they need to say."

It's possible the optimism on trading floors proves warranted this time around and the January rally turns out to be the start of the big, broad market rebound that Wall Street so desperately wants.

The bulls point repeatedly to one thing: Inflation has finally, mercifully, begun to abate. The consumer price index clocked in at an annualized rate of 6.5% in December, down from a high of 9.1% last year. Moreover, there are mounting signs that further declines are to come.

The market is "pricing in rate cuts, it's already seeing the data roll over," Kelsey Berro, a JPMorgan Asset Management fixed-income portfolio manager, said on Bloomberg Television on Jan. 25. "So the Fed's going to keep trying to communicate higher for longer, but the market is already looking through it."

Both the Fed and Wall Street were blindsided by the inflation spike despite all the warning signs the stimulus-fueled economy was showing in the early days of the pandemic. As prices started to jump in 2021, Powell infamously kept insisting this was a "transitory" blip that would likely fade on its own as pandemic-induced supply chain kinks sorted themselves out—an argument that investors were all too happy to believe. In the early summer of that year, they were betting the Fed would only nudge its benchmark rate a tick higher in all of 2022, bringing it to around 0.4%.

Then, as Powell and company realized they were wrong and started frantically pushing rates higher, investors consistently underestimated their willingness to inflict pain on the economy and markets. This revealed a fundamental flaw in the collective Wall Street mindset. Ever since the late 1980s, traders had been taught that the Fed was always there to prop up financial markets when things got dicey. It would scrap plans to hike rates or maybe even start cutting them. The "Fed put," they called it, and it was a fine (and highly profitable) axiom to trade on during all those decades when inflation was tame. When that era suddenly and unexpectedly ended, so too should have the blind faith in the Fed put.

But it lived on.

Late last spring, as markets swooned, traders started wagering that the Fed would hit the brakes on rate hikes, at least temporarily, in the fall. Then, a few months later, they determined the central bank would take the benchmark rate no higher than 3.4%. It's already over 4%—the latest hike took it up within a range of 4.50% to 4.75%—and in a press conference following the announcement of the change Powell said ongoing increases would be appropriate.

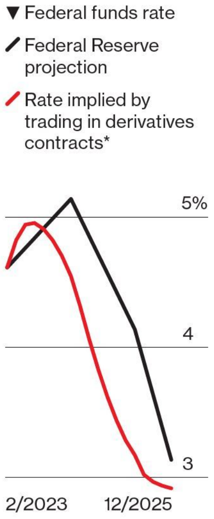
Trading in derivatives contracts indicates markets expect the rate to peak at around 4.9% by May or June, then fall below 4.5% by the December meeting, with further cuts indicated during 2024. By contrast, the Fed's latest forecasts have 17 of 19 officials projecting rates above 5% for the entirety of 2023, with two of them above 5.5%.

Some bond-market veterans aren't buying it. "There is no way the Fed is going to 5%," Jeffrey Gundlach, the chief investment officer at DoubleLine Capital, proclaimed in a recent tweet.

This sounds a lot like what was said about 3% and then 4%, but Gundlach seemed to be giving voice to a lot of frustrated investors out there. A few days after the tweet, he told a webcast audience that "40-plus years of experience in finance strongly recommends that investors should look at what the market says over what the Fed says." More than half of the investors who responded to a Jan. 29 Bloomberg MLIV Pulse survey said they agreed with him.

There have been moments in recent history when the market has indeed won out, such as when traders wagered the Fed's rate-hiking cycle that began in late 2015 would end sooner than officials were indicating.

This is a very different moment now, though. Barbara Ann Bernard, the founder of Wincrest ▶



◀ Capital, a Nassau, Bahamas-based hedge fund, looks at the current circumstances, including all the additional inflationary pressure that the looming economic rebound in China will create, and sees little reason to believe the market finally has gotten one right again. In 2021, Bernard was part of the small minority of skeptics who didn't fall for the transitory inflation argument. (She called it "nonsense" at the time.)

"The market's fighting the Fed," she says, "and I think the Fed's going to win." —*Katherine Greifeld and Liz Capo McCormick*

THE BOTTOM LINE Data showing that inflation is abating has markets betting that a Fed pivot is imminent. That optimism has kept financial conditions looser than central bank officials would like.

In Case of a Debt Crisis, Break Glass

● The US Treasury has a few options if Congress doesn't cooperate, but they're all risky

The deep divide between Republicans and Democrats in Washington over raising the $31.4 trillion debt ceiling has sparked discussion about what the US Department of the Treasury could do to keep making payments on federal obligations if it runs out of funding space. There are several options that bypass Congress. All have drawbacks, though advocates argue they'd be vastly preferable to defaulting on US Treasuries.

Some have been deemed gimmicks, and some are potentially illegal. "None of these ideas are great," says Darrell Duffie, a Stanford University finance professor and expert on the structure of the US debt market. "It's all a question of degree."

Here's a list of alternatives, along with an assessment of their risks.

THE COIN

A social media favorite, this one hinges on a 1990s law setting parameters for what were intended to be collectible coins. The legislation provides for the minting of platinum coins of denominations at "the secretary's discretion." That would appear to enable the department to mint, say, a $1 trillion coin, which it could then attempt to deposit with the Federal Reserve. The idea is that the Fed could then credit the Treasury's cash balance by that same amount—giving it the ability to make payments on federal obligations.

Treasury Secretary Janet Yellen has dismissed this idea as a "gimmick," and she told the *Wall Street Journal* it's possible the Fed wouldn't even accept the coin as a deposit.

The US's central bank has played a key role in a debt-limit fight before. In 1953, President Dwight Eisenhower's administration deposited gold certificates at the Fed to free up cash and buy itself more time to reach a debt deal with Congress. But that solution was based on tapping into assets that already existed—unencumbered stocks of gold—rather than a new asset conjured up by the US Mint.

"None of these ideas are great. It's all a question of degree"

Even if the Fed agreed to take the coin, there would be challenges. The extra money creation would inject inflationary liquidity into the financial system at a time when policymakers are battling to restore price stability. Even if it all worked out, the precedent might undermine investor confidence in US government debt and also in the dollar.

PREMIUM BONDS

The law sets a limit on the overall debt level, but it gives the Treasury broad discretion on how to structure it. One idea that's getting airtime of late is to issue new bonds that pay much higher fixed-interest rates than the existing debt. Investors would pay high prices—in other words, a premium—for them, which the Treasury could use to retire a larger amount of debt carrying lower prices.

This sort of financial engineering would undermine the Treasury's long-standing debt management practice of being "regular and predictable." For decades, officials have operated on the principle that having the public know well in advance exactly what kind of securities the Treasury will be auctioning, when and in what amount, builds trust in and demand for those securities. That in turn ensures the cheapest financing for the US government.

A sudden change in auction conventions would upend all of that, potentially damaging confidence in US securities and making new debt issuance more costly. In 2001, when the department announced a plan (which proved temporary) to stop selling 30-year bonds, the Treasury came in for a firestorm of criticism that it hadn't sufficiently prepared the public for the change. The introduction of a new type of debt that would face uncertain demand carries even greater risk. "While it may be better than minting a $1 trillion platinum coin, it is still a bad idea," says Kenneth Tremain, the chief investment officer of IVI Capital Management.

PHOTO ILLUSTRATION BY 731; PHOTOS: HAND: GETTY IMAGES; COIN: DONKEYHOTEY. DATA: DREWERY MARITIME RESEARCH

THE PRIORITIZATION PLAN

Some Republicans have argued the administration could prioritize payments so interest and principal are still paid on the debt, Social Security benefits are still distributed, and the core functions of government continue. But administrations have repeatedly argued they don't have the authority to execute such a plan, and even if the Treasury did, it would be extraordinarily hard to execute in an orderly way. Government revenues and expenditures are lumpy—with surpluses in some months and big deficits in others.

Even if debt servicing continued under a prioritization plan, critics warn that delaying other payments in the meantime would seriously damage US credibility. Fitch Ratings, for example, says "that would not be consistent" with the AAA credit rating it assigns the US government. Plus, there would be a major economic impact from the Treasury not making payments. There would be the direct hit from the government delaying purchases of goods and services, but also households might cut back their own spending if they didn't receive the federal benefits they expect. What you'd get is an instant recession, economists warn.

THE CONSTITUTION

One school of thought holds that the debt limit itself violates the US Constitution's 14th Amendment, which reads in part "the validity of the public debt of the United States…shall not be questioned." Advocates have argued the amendment, passed in the wake of the Civil War, empowers the president to pay all debts. But this interpretation has never been legally tested and raises myriad questions. Would Social Security transfers qualify as a US "debt"? Would there be a lawsuit? Would bond buyers get spooked and demand higher rates as the legal wrangling continued?

"Investors would rightly wonder if using the amendment to abrogate the debt-limit law would stand up in the courts and, even if it did, what that would mean for our political system's checks and balances," Moody's Analytics Chief Economist Mark Zandi wrote in a recent note. "Given the constitutional crisis this would set off, financial markets would still be roiled, and a recession ensue."

THE TECHNICAL DEFAULT

After ruling everything else out, the Treasury could simply tell bondholders it will make them whole later, while suspending payments for the moment as it waited for Congress to act. That would constitute a technical default.

Such an occurrence isn't without precedent: In 1979 the Treasury was late making payments on some of its maturing T-bills. While that incident isn't officially acknowledged by the government as a default, it does meet the common definition of one. It also prompted a lawsuit and resulted in officials providing compensation to those who endured losses.

Most notably, the 1979 incident led, according to one analysis, to a jump of more than 60 basis points in one-month borrowing costs—and that didn't disappear even after payments were made. Since then, the Treasury market has become vastly bigger and even more important within the global financial system. So the reaction to another technical default is likely to be all the greater.

Most observers expect that the US government would ultimately—and probably rather quickly, if financial turmoil hastened a congressional deal—make good on its obligations for any missed payments. But the delay would still carry significant costs: to those who don't get paid on time, to the government and to the global economy and markets.

"These unlikely workarounds do not avoid the chaos that is inherent to the debt-ceiling binding. The only effective solution is for Congress to increase the debt ceiling or, better yet, abolish it," Wendy Edelberg and Louise Sheiner at the Brookings Institution wrote in an assessment that echoes the view of many.

%
The 14th Amendment
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If an episode from 2008 is anything to go by, market turmoil triggered by taking any of these paths would bring Congress around swiftly. The House of Representatives on Sept. 29 that year rejected a $700 billion bailout plan in the middle of the financial crisis, sending the S&P 500 down almost 9% that day. A few days later, enough lawmakers came around and cleared a slightly revised version of the package. *—Steven T. Dennis, Benjamin Purvis, Elizabeth Stanton and Alex Harris*

THE BOTTOM LINE The US Treasury has several options to keep making payments if Congress delays in lifting the debt ceiling, but all could inflict lasting damage to America's creditworthiness.

Small Business

The Chickens That Lay Zero-Carbon Eggs

The birds can roam, roost on simulated trees and peck at logs and branches

Dutch producer Kipster cuts emissions by replacing the fresh grains hens consume with leftovers humans won't eat

In the mid-aughts, Ruud Zanders was running a company booking more than $40 million in annual sales from 1 million hens across Europe laying hundreds of millions of eggs a year. But a combination of overleveraging, the credit crunch that foretold the Great Recession and an outbreak of avian influenza cost him his farm and his home. "We could have survived any one of these, but not all three," Zanders says.

As he struggled to get back on his feet, Zanders sought a more sustainable way to produce eggs, something that would benefit people, birds and the environment. He came across research advocating a shift away from feeding animals with corn and other grains that humans might otherwise eat. Almost a third of the world's grain is used as fodder for livestock. What if he could give laying hens food waste instead?

In 2017, Zanders's company, Kipster ("kip" means "chicken" in Dutch), started producing eggs from hens fed with wasted food: bread past its expiration date, unsold crackers and—this being the Netherlands—stale stroopwafels, the country's signature caramel-filled cookies. Zanders came up with a barn design that stands in sharp contrast to the windowless, rectangular, aluminum-clad sheds common across the Netherlands and the American Midwest. A ventilation system adapted from parking garages cuts dangerous accumulations of ammonia and particulate matter by more than 70%. Solar panels cover the gently

February 6, 2023

Edited by
Rebecca Penty and
David Rocks

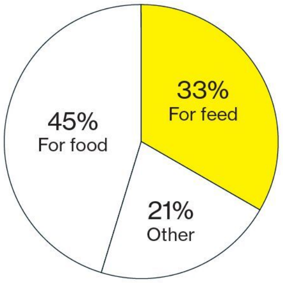
COURTESY KIPSTER. DATA: FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

sloped, south-facing roof. The north-facing front is glass, allowing natural light to flood the chickens' living area without overheating. And the birds roam freely, roosting on simulated trees made from two-by-fours and pecking at logs and branches.

It took years for Kipster to figure out how to produce chicken feed from the human food-waste stream, as finding the right combination of leftovers that provide the nutrition hens require proved complicated. Unsold bread and cookies are combined with manufacturers' processing failures and test runs at a mill near the German border that had been making similar products for pigs for decades. But pigs will eat pretty much anything. Laying hens are pickier.

The grains consumed by animals later eaten by humans could nourish far more people than the meat those animals produce, says Hannah van Zanten, a professor of farming ecology at Wageningen University in the Netherlands, who's advised Zanders. "If we don't feed livestock with grains anymore, but only with leftovers, the environmental impact will go down," she says. The carbon footprint of Kipster's feed is less than half that of the traditional stuff, the company says. But because of the complexity of collection, it costs slightly more. Kipster's eggs aren't organic, because the food waste isn't so certified, but they do sell for about 10% less (though they're roughly 50% more than the cheapest mass-market eggs).

Global grain supply in 2020



The farm's design also helps reduce the likelihood of diseases jumping from animals to humans, says Thijs Kuiken, a pathologist at Erasmus Medical Center in Rotterdam—a growing concern as avian influenza risks becoming endemic in Europe. Although the hens are less densely packed than in most intensive poultry operations, they have less outdoor space, reducing the chances that they'll be infected by feces dropped by passing wild birds. Kipster received the highest rating from Beter Leven, a Dutch animal welfare certification agency.

In 2021 the company announced plans to license its system to Kroger Co., the top US grocery chain. A Kroger supplier in Indiana, MPS Egg Farms, adopted it, slanted barn roofs and all. Its first Kipster eggs hit the shelves a few weeks ago. Four US barns will soon be in operation, according to Kipster, and the company is in talks to license its system to producers in Belgium, France and the UK for production by yearend.

The downside? There probably aren't enough leftovers available to feed all the world's livestock. So achieving further meaningful reductions in carbon emissions from agriculture will require people to get more protein from plants and less from animals. And that, Zanders says, probably even means cutting egg consumption. "It may sound strange coming from a poultry farmer," he says, "but we need to eat fewer eggs." ——*Paul Tullis*

THE BOTTOM LINE Kipster's barn design includes ventilation to cut dangerous accumulations of ammonia, north-facing windows that allow natural light without overheating and a roof covered in solar panels.

Call Me by My New Name

To come up with a winning moniker for your company, follow trends and consult a chatbot

In 2019, a budgeting app with a catchy name—Klover—made its debut. "The idea was for Klover to give consumers a sense of fortune or luck, like a four-leaf clover," says Chief Executive Officer Brian Mandelbaum. Less than three years later, the company began expanding into business-to-business markets, prompting second thoughts about that branding. "Klover with a k is clever, but we have nothing to do with luck," he says. "It's really about science and statistics and tech, so we reconsidered the name."

A decade ago, rechristening a company was considered perilous, if not unthinkable. Those that made a change often limited themselves to shortening a name, such as Weight Watchers' move to WW in 2018 and Dunkin' Donuts' shift to Dunkin' a few months later. Then global events made many companies reconsider everything from product names to the entire corporate identity.

During the Covid-19 pandemic, Corvid by Wix—a website builder—became Velo by Wix. Since Russia's invasion of Ukraine, Russian names have vanished in favor of generic global-sounding brands. A week into the war, Stoli Group rebranded its Stolichnaya vodka as simply Stoli. "I work with three companies who have renamed because of the war in Ukraine," says Neri Karra ▶

◀ Sillaman, a luxury brand adviser and professor at the University of Oxford's Saïd Business School.

When Klover considered changing its name, a consultant proposed "Attain." Market testing found consumers were left cold, but business customers loved it. In November, the company rebranded as Attain but kept the Klover name for its app. "What that does is give us the opportunity to have a portfolio," says Mandelbaum. "Klover is a successful brand within it."

These days, customers have grown used to rebranding as mergers, splits and startups spawn new identities, and companies swiftly hammer in the change by showering social media with their updated monikers. Here's how to come up with a winning company name:

Don't seek perfection: Facing pressure to launch or round up investors, entrepreneurs often select a name in less than a week. That's fine, but understand that while some people will love your new identity, others will hate it. "Founders who delay are also probably spending too long building the perfect website, the perfect graphics and the perfect logo," says Verineia Codrean, head of sustainability and strategic partnerships at Startup Norway, who has helped name hundreds of companies.

Get trendy: Today's names are short (one or two words), easy to pronounce and quickly digested on social media. It's best when they dovetail with societal trends that will stick around for a decade-plus, such as artificial intelligence or the green transition. "It's a massive advantage," says Codrean.

Be creative: A name should express what the company does in a playful or clever manner and be unusual enough that customers won't stumble across a competitor when looking for you. Consider climate impact consultant Plan A (there is no Plan B, get it?) and Startup Norway's annual event, Startup Extreme (tagline: "extreme times, extreme opportunities"). Online eyewear retailer Warby Parker, launched in 2010, is named after two Jack Kerouac characters. It had sought a trade name that resonated because the company is incorporated as the uncatchy JAND Inc.

Think about place: Creative names often use locations, foreign words or well-known folk characters to convey an attitude or value. European food delivery company Oda uses a Norwegian women's name. "You will not have to worry about a competitor using that," Codrean says. "And it gives you room to grow—you can go in any market." Allbirds Inc., a shoemaker focused on sustainability, combines references to nature and New Zealand—where a founder hails from—which has few native land mammals.

Ask a chatbot: Tell a service such as ChatGPT your mission, vision and any trends you want to communicate ("Come up with 10 potential names for a sustainable clothing company") and see what pops out. Try various queries to get multiple options for brainstorming, and test potential names on target customers.

What not to do: Don't rely too much on friends or family. They're not your target audience, and they'll likely back you even if you choose something lame. And don't name the company after yourself, which is limiting, narcissistic and very early-aughts. Finally, remember that renaming is a viable option if your first choice doesn't work—though it's typically avoidable. "Most of the time I advise clients not to" change their name, Sillaman says. Instead, consider a separately branded service or product—whose name you can, again, obsess over. —*Arianne Cohen*

THE BOTTOM LINE Rebranding an existing company doesn't faze customers as much as it once did, but it's best to choose a new identity that reflects your company's values and goals in a playful and clever way.

A Bet on High-End Bikes in Portugal

Frame maker Carbon Team says speedy delivery times give it an edge over Asian rivals

During the pandemic, people worldwide rediscovered biking, relishing any chance to get out of the house during lockdowns while avoiding sniffles and sneezes on subways and buses. As bicycle sales in Europe jumped more than 10% in 2020, retailers that had grown dependent on Asian suppliers struggled to meet demand. For Emre Ozgunes, that presented an opportunity.

ILLUSTRATION BY YANN BASTARD; OCTAVIO PASSOS/GETTY IMAGES

Ozgunes aims to win over buyers of $5,000-plus bikes seeking “Made in Europe” cachet

Ozgunes, general manager of Carbon Team Lda., a manufacturer of high-end bicycle frames in Portugal, is betting he can gain an edge over producers in Asia whose transport costs have been rising, with delivery times sometimes stretching to more than a year. In his niche market of carbon-fiber frames for bikes that cost €5,000 ($5,400) and up, he figured he could appeal to riders seeking homegrown cachet. “Until now, they didn’t have another option,” Ozgunes says. “With Carbon Team, they do.”

Supply bottlenecks and delivery delays during the pandemic raised awareness of Europe’s dependence on Asia for goods ranging from face masks to pharmaceuticals. That’s spurred manufacturers such as Carbon Team to expand in hopes that faster delivery times can offset the prices they must charge given Europe’s higher wages—even in a relatively inexpensive country such as Portugal. “Growing production of some goods like motorcycles, bicycles or jewelry—which had been falling substantially through the 2000s—points to some small pockets” of manufacturing returning to Europe, says Maeva Cousin, a senior economist at Bloomberg Economics.

The greatest advantage for European companies will be in pricier products such as Ozgunes’s frames, where buyers tend to care about provenance and are willing to pay extra for goods produced in the region. “Europeans increasingly want ‘Made in Europe,’” says Gil Nadais, secretary-general of Abimota, a trade group for bicycle and motorcycle makers. “The competition isn’t about price.”

Portugal in 2019 unseated Italy to become Europe’s biggest bicycle manufacturer, though its 2021 production of 2.9 million bikes remains behind what producers in Asia exported to Europe. The industry employs about 10,000 people in Portugal, and exports have grown more than 30% in each of the past two years, according to Abimota. Europeans bought as many as 1 million carbon frames last year, but fewer than 30,000 were manufactured in the region, according to Conebi, a trade group for European bike producers. By 2030, Conebi predicts, up to 20% of carbon frames sold in the region could be manufactured there—and Ozgunes aims to be a big part of that. He says he can deliver frames within six months of receiving a client’s design, while for an Asian competitor it would take three times as long.

Ozgunes in 2019 started building an €8 million factory in Campia, a three-hour drive (or a very long day’s bike ride) north of Lisbon, and he’s now laying plans for a €5 million expansion. Aiming to become Europe’s biggest maker of carbon frames, he expects to almost triple staff this year, to 120. He says production will jump to 18,000 frames in 2024, from 3,500 last year, and sales will more than double next year, to €10 million.

At his factory, workers shape the frames by pressing carbon into metal molds, then they place them in ovens where the fiber is baked to give it strength. When completed, the frames are tested on machines that simulate the jolting, jiggling, and jostling of a ride. Ozgunes says his frames are made as a single piece of carbon fiber rather than multiple elements glued together, making them sturdier and as much as 20% lighter than those made by some rivals—some weigh less than 800 grams. “It’s still a very manual process,” he says. “That’s why a carbon-fiber bicycle is much more expensive than an aluminum bike.”

He faces increasing competition. Italy’s Bianchi SpA says it will start production of carbon frames at a new plant near Milan this year. Ernesto Colnago aims to boost 2023 output almost 20% at its Italian factory, to more than 7,000. And Europe is home to many smaller manufacturers such as Hope Technology Ltd., which produces about 500 carbon frames a year in the UK, France’s Look Cycle (a maker of frames for the French and US Olympic cycling teams) and mountain bike specialist Last GmbH in Germany.

In some respects, Ozgunes remains dependent on lengthy supply chains. The carbon fiber he uses is produced in Japan and then shipped to Italy for processing before arriving in Portugal. He says that while he’s seen some hiccups in obtaining a few specialized types of carbon fiber, the arrangement hasn’t created any insurmountable obstacles. For his bike-maker customers, things are more complicated. Even if the frame is made in Europe, components such as brakes and derailleurs typically come from Asia, and it can take as long as two years to get many of those. Ozgunes says some clients are looking for producers closer to home, and one European bike maker had to cancel an order of 300 frames for delivery in January because it couldn’t get parts. “Clients aren’t only thinking about frames,” Ozgunes says. “Even if Carbon Team is the fastest supplier in the world, that’s no use if they don’t have components.” —*Joao Lima*

THE BOTTOM LINE Carbon Team is planning a €5 million expansion of its factory and expects to triple staff this year. Production in 2024 will jump to 18,000 frames, the company says, with sales more than doubling, to €10 million.

The Richest Fanboy In Wrestling

Tony Khan’s All Elite Wrestling wants to unseat WWE, if its chairman, Vince McMahon, doesn’t do it first

By Kim Bhasin

Photographs by Jake Holler

Every Wednesday, Tony Khan sets up his makeshift office in the dark. On this particular evening in September, he's at Arthur Ashe Stadium in the Queens borough of New York, maneuvering through a maze of scaffolding beneath a stage to get to his chair propped in front of a screen with 15 camera feeds. Khan scans between his scribbled notes and the pro wrestlers punching, grappling and suplexing each other in front of nearly 14,000 raucous fans, checking the clock for the upcoming commercial break and, with it, a rare lull in the drama. Pro wrestling is, after all, as much a sport as an elaborately plotted soap opera.

An AEW match this year in Lexington, Kentucky

For four years, Khan's All Elite Wrestling LLC, or AEW, has operated as an upstart rival to World Wrestling Entertainment Inc., deploying its own brand of predetermined mayhem to convert die-hard fans and seduce onetime viewers for whom WWE had become just another PG-rated borefest. Khan's formula? More blood spilled, more folding chairs smashed, more swearing and more nuanced storylines. "You genuinely get the feel that AEW is written by a fan for fans," says Tom Campbell of industry site Cultaholic Wrestling.

Inside the ring, Canadian wrestling legend and former WWE firebrand Chris Jericho, whose character is a narcissistic rock star with flowing blond hair, tries to wallop the chiseled Swiss hero Claudio Castagnoli in the skull with a baseball bat. He fails, but when the referee's back is conveniently turned, he kicks his opponent square in the nether regions. Castagnoli is helpless as Jericho delivers his finishing maneuver, a spinning elbow to the face. New champion! That's how it goes in the scripted world of pro wrestling, where the villains are just as important as the heroes. As Jericho returns backstage, Khan rips off his headset and pounces on his sweat-drenched star to give him a hug. "I f---ing loved it!" he yells, before scurrying off to man his station for the next match.

Khan, who has the wispy build and frenetic energy of a teenager, is the most well-funded benefactor in decades to take on the WWE hegemony. His father is Shahid Khan, the Pakistani-American owner of the National Football League's Jacksonville Jaguars and the English Premier League's Fulham FC, who made his fortune building Flex-N-Gate into a nearly $10 billion US auto-parts manufacturer. After moving to the US as a teen, Shahid worked his way up from washing dishes to buying out his former employer Flex-N-Gate in 1980. Today it's one of the largest privately held companies in the US, and the Bloomberg Billionaires Index pegs the Khan family's net worth at $7.6 billion. When Tony told his father he was going to hatch a WWE competitor, his father's reaction: Are you nuts?

Khan's professional experience until then had mostly consisted of working on his dad's sports teams, taking roles as the Jaguars' chief football strategy officer and then as vice chairman and director of football operations at Fulham. With his obsessiveness for analytics and almost-annoying optimism, he earned a reputation as slightly more than your average nepo baby. (He still holds both roles.) Bankrolled by Khan's family fortune, AEW was his first swing at building his own business from scratch—a business long dominated by a single towering brand, WWE, and its chief architect, Vince McMahon.

Khan has spent tens of millions of dollars luring top stars such as Jericho, a six-time WWE world champion, and Castagnoli, a seven-time WWE tag-team champion, creating a fierce fight for talent that's been as dramatic at times as the plotlines in the ring. Wrestling stars have been pinging between the upstart and the incumbent, chasing dollars, autonomy and validation. Khan has also been sourcing talent from the indie circuit, where thousands of wrestlers perform for tiny paychecks and a few dozen people in venues such as nightclubs and bingo halls. In March, Khan acquired the small but respected pro wrestling company Ring of Honor from Sinclair Broadcast Group Inc. for an undisclosed sum, adding a new crop of wrestlers, some intellectual property and an extensive video library. AEW is also considering starting a streaming service, likely through a deal with its broadcast partner, Warner Bros. Discovery Inc., according to a person familiar with management's thinking, who asked not to be named. Last year, AEW broke $100 million in annual revenue for the first time, the person says.

As its new rival gains ground, WWE finds itself more volatile than ever. McMahon, who bought WWE's predecessor from his dad in the 1980s, transformed it from a regional attraction to a $6.3 billion empire. In July, after the *Wall Street Journal* revealed that he had secretly paid $12 million in hush money payments to settle

allegations of sexual misconduct and infidelity, his board of directors opened an investigation, and McMahon announced his abrupt retirement. Six months later, it seems he's changed his mind. In early January, as controlling shareholder, he proclaimed himself chairman again, booted three board members and replaced them with allies. Two more quit in the aftermath. Now his daughter and heir apparent, Stephanie McMahon, has left the business and her role as co-chief executive officer, leaving Nick Khan (no relation to Tony) in charge. In the weeks since, WWE has hired financial advisers to explore strategic options. Investor groups are also suing over McMahon's surprise return and sex scandal.

WWE declined to talk to *Businessweek* about the saga. In a letter sent to the board in December, McMahon said he left WWE to give space for the investigation, but it was critical for him to return to lead the exploration of a possible sale and negotiate new media rights deals. “No one has a greater interest in the long-term success of WWE—or is more aligned with all WWE shareholders—than me.” McMahon's lawyer released a statement in January regarding the latest settlement stating that the wrestling executive denied sexually assaulting the accuser and “settled the case solely to avoid the cost of litigation.”

Pro wrestling is a business with billions of dollars in broadcast rights at stake. WWE made nearly $1.1 billion in revenue last fiscal year, dwarfing its new rival by more than tenfold. But AEW's viewership has crept up, breaking a million on several episodes, or about half that of WWE's top show. Both WWE's and AEW's rights packages are expiring soon, setting up a crucial showdown between potential suitors that range from Fox Corp. to Amazon.com Inc. Analysts say Comcast Corp. could end up paying more than $2 billion to renew the arrangement it has with WWE to put its content on NBC's Peacock streaming service. Khan has promised that whatever deal replaces AEW's current one will be “historic.” “One of the few areas in which media investors remain bullish is in sports rights,” says Bloomberg Intelligence's Geetha Ranganathan.

Still, there's no shortage of skepticism about Khan's chops. Podcast hosts, former wrestling executives and ex-staffers say AEW is run by a rich kid spending daddy's cash. Jaguars defensive end Yannick Ngakoue once called him out in public as a “spoiled brat” before getting traded away. “Tony has a tendency to ricochet off walls and say stupid shit, because he doesn't really understand much about the industry, really,” legendary wrestling TV producer Eric Bischoff, who's worked with AEW, told industry publication *Fightful Magazine* in November. “He's a wrestling fan with a lot of money.”

Into kayfabe in Kentucky

Khan, who's 40, knows his credibility is in question “on a daily basis.” But AEW wrestlers are unanimous about his dedication. They say he's a wrestling nut who's excited about everything, all the time, running from arenas to meetings, involved in every last detail, from scripts to sets, from contracts to bookings. Stay in your seat after a live show goes off the air, and you'll see Khan and his mop of brown hair pop onstage as a hype man, pumping up fans to stay for additional matches. Backstage he perpetually shouts: “Let's f---ing go!”

It's not easy getting new people to watch pro wrestling. Haters deride it as fake fighting or just don't understand why anyone would watch a “sport” with prearranged victors. Even for the willing, the barrier to entry is high. You have to learn some basics to follow the storylines, and you may have to fully suspend your disbelief.

A wrestling match is akin to an operatic dance, combining choreography with improvisation. Fights are outlined beforehand by the wrestlers, producers and referees, with the highest-impact moves—a powerbomb through a table, a moonsault off the top turnbuckle—designed to evoke especially rowdy reactions from the crowd. Performers are constantly communicating with one another, whispering their next moves. The ref's in on it, too, discreetly giving warnings about timing and sharing instructions from backstage to slow down, rush the finish or alter plans entirely. Winners are preselected by bookers to fit long-term storylines, and finishing sequences are often meticulously arranged. The narratives can run over months or even years, not unlike how *Game of Thrones* characters scheme across multiple episodes before finally meeting in battle.

The average AEW viewer is more of a wrestling nerd than the casual WWE fan, many of whom don't care to learn the textbook's worth of insider slang that might enrich their understanding of what's happening in the ring. Wrestling jargon rivals the most abstruse corporate-speak. Take this lingo jambalaya: “On the go-home show, the babyface got a huge pop as he delivered a worked-shoot promo, chiding his opponent as a glorified jobber who's garnered massive heat for botching spots ever since he turned heel and left the stable.”

Get all that? AEW fans did.

If there's one term that explains wrestling culture, it's “kayfabe” (KAY-fayb), which is the portrayal of staged events as true. The term, which Merriam-Webster speculates is derived from either carnival slang or from a

Wrestling hasn’t had a legitimate power struggle since its last billionaire tapped out two decades ago

pig-Latinized version of “be fake,” is the basis of all pro wrestling shows going back to the early 1900s. In the ’50s and ’60s, wrestlers such as Bruno Sammartino and Abdullah the Butcher would never break kayfabe, staying in character even if spotted in the wild.

Nowadays the lines are blurrier, and hardcore fans know wrestlers by both their on-screen names and their real ones. The inability at times to tell reality from kayfabe only increases engagement, leaving fans to debate what’s part of the show and what isn’t. (The injuries are often real. Former WWE champion Big E suffered a broken neck when he landed on his head during a match in March.)

Often it’s a bit of both, a dynamic that can bleed into the higher-level corporate spectacle, too. On live TV in November, AEW world champion Maxwell Jacob Friedman, whose character is a Burberry-scarf-wearing Long Island douche, grabbed a microphone and brought up his real-life contract talks. When his AEW deal expires, he told the crowd, he’d go with whoever offered him the most cash. He name-dropped both Khans, Tony and WWE CEO Nick. “I pray to God the right Khan foots the bill, and Lord knows I am not talking about Tony,” Friedman said with a smirk, drawing boos from the AEW crowd. “I am talking about my boy, jolly old St. Nick.”

Wrestling hasn’t had a legitimate power struggle since its last billionaire tapped out two decades ago. In 1988, as CNN and TBS were ascending, Ted Turner figured taking on WWE would be the best way to expand his broadcast empire. He acquired a regional wrestling company, invested millions in it and devoted five hours of prime-time cable TV each week to the newly branded World Championship Wrestling, or WCW. McMahon had expanded his family business by squashing regional players to create a national powerhouse around larger-than-life stars such as Hulk Hogan and André the Giant. But by the early ’90s, the old acts had grown stale, and the new ones were dull. WCW came in with ample funds and an edge, stealing fans with a wild and unpredictable show led by stars poached from McMahon, including Hogan.

AEW
WORLD
TRIOS
CHAMPION

AEW championship belts

What followed was the fabled Monday Night Wars, a ratings showdown between Turner and McMahon that lasted through the ’90s. At the time, Khan was in high school in suburban Illinois, and pro wrestling’s popularity was skyrocketing. He collected tapes of indie shows, posted on forums and glued himself to the TV every time “Stone Cold” Steve Austin or Dwayne “The Rock” Johnson appeared on *Monday Night Raw* to open a can of whoop-ass or lay the smackdown. Powered by Austin, Johnson and other stars, WWE resoundingly won the wars, buying WCW in 2001 for the meager sum of $2.5 million.

Khan fantasized about running a wrestling business but instead got a finance degree and joined the Jaguars after his dad bought the NFL franchise in 2011 for $760 million. The younger Khan, then in his 20s, was entrusted with its analytics department, supplying the coaching staff with data such as player speed indexes and play-call percentages. “I couldn’t have walked in and started a department like this had I not been my father’s son,” he admitted to a local paper at the time.

The idea for AEW came to Khan in early 2018. After watching the Jaguars lose a playoff game, he went to a party in Beverly Hills, where he ran into Kevin Reilly, then the president of TNT and TBS, and found out Reilly was considering bidding big money for a WWE rights package. Reilly eventually lost out to Fox, which paid more than $200 million per year for a two-hour broadcast window, but Khan saw the deal as proof of demand. “I did believe that, for less than that, we could launch an aggressive expansion of a startup wrestling company,” he says.

Before he could line up a broadcast agreement, though, he needed wrestlers. He learned that some major stars’ contracts were about to expire: Jericho, for one. A number of wrestlers, such as Kenny Omega and the Young Bucks, who were signed to organizations in Japan, would also be hitting the market. Cody Rhodes, son of wrestling legend Dusty Rhodes, was available on the independent circuit. Khan courted each one, meeting Jericho while he was on tour with his band, visiting the Bucks at a wrestling show in London and hosting Rhodes in the owner’s box at a Jaguars game. By fall, he’d persuaded them to form his core roster and committed to millions of dollars in salaries.

Khan also brought in WWE ▶

◀ champion Dean Ambrose, now known as Jon Moxley in AEW. When Khan showed up at Moxley's home in Las Vegas, the wrestler was skeptical. Rich benefactors typically just want to meet, take wrestlers out to a strip club and throw cash around, he says. "I didn't know if it was gonna be an old guy in a suit, a mob boss, an eccentric dude in a Hugh Hefner robe or what." Instead, the guy at the door was in jeans and a hoodie, and they talked about pro wrestling for hours. "I told him at my kitchen table that night: If this is what you're doing, then I'm in," Moxley says.

As 2018 came to a close, AEW had everything lined up except a TV deal, the prerequisite for an actual business. Around Christmas, Khan had several arguments with his father about whether the enterprise could work. Shahid, who declined to talk to *Bloomberg Businessweek*, wasn't sold, Khan recalls, but "he ended up saying something along the lines of 'I guess you're going to inherit half of this money, and if you want to start blowing it now, fine.' "

Khan decided to risk blowing more of his inheritance five months later, with an event aptly named Double or Nothing—nine matches at the MGM Grand Garden Arena in Paradise, Nevada. Eleven thousand people bought tickets, and more than 100,000 spent $49.99 to watch on pay-per-view. The wrestling press ate it up, and ESPN and CBS Sports covered it, too. "The competition has arrived," declared Canadian blog Slam Wrestling. "It only took 18 long years but the day is finally here."

That same month, AEW finally secured a broadcast-TV slot, signing an agreement with Warner Media LLC to air shows on TNT prime time. TNT put AEW on Wednesdays, immediately bringing Khan head-to-head against McMahon. Although WWE's marquee shows, *Raw* and *SmackDown*, run on Mondays and Fridays, Wednesday nights were allocated to its smaller brand NXT, which features up-and-coming wrestlers and former indie stars trying to get promoted to the main roster. AEW's two-hour weekly show, *Dynamite*, premiered in October 2019, and the inaugural episode drew 1.4 million viewers, sparking a back-and-forth Wednesday-night ratings war that would persist for two years.

Khan won nearly every week, until a lackluster December made him reconsider his creative process. The writing on AEW's first shows was done by committee, with top wrestlers included in the meetings, leading to some disjointed storytelling. Khan axed that approach, taking full control of the narratives. "I felt like we needed to really reevaluate the way we presented the show," he says.

At WWE headquarters in Stamford, Connecticut, executives monitored their new competitor's progress and wondered aloud what to do. Bryan Danielson, one of WWE's top stars, says that in early 2020 McMahon called him and asked a question that shocked the wrestler: "Do you see anything that AEW's doing better than us?" Danielson, at home on paternity leave, spent the next two weeks watching every morsel of AEW programming and came to a conclusion: AEW committed more time to and placed more value on the craft of fighting in the ring. WWE's shows were often marked by long segments of characters on the microphone and short matches. "It feels like you're watching a wrestling show without any wrestling," Danielson told McMahon.

During the pandemic lockdowns, WWE and AEW shows got stranger and stranger, with wrestlers beating each other up in themed matches in vacant arenas. One WWE event had an Eye for an Eye Match, where the winner was determined by whoever plucked the other's eye out first. (Spoiler: Seth Rollins plucked Rey Mysterio Jr.'s "eye" from its socket—in kayfabe, thankfully.) AEW tried to stage something called an Exploding Barbed Wire Death Match, but it fizzled out with only a few sparklers going off. A Stadium Stampede Match, in which a wrestler backflipped off a goalpost in the Jaguars' empty football stadium, fared much better, with critics lauding it as wrestling at its "chaotic finest."

As Khan sees it, there's room for two giant wrestling organizations to compete alongside each other globally, not unlike Coca-Cola and Pepsi or McDonald's and Burger King. "An easy thing for people to understand is the idea of a challenger brand," he says. "What's Burger King's marketing? It's basically 'Hey, guys, Burger King's great. McDonald's sucks.' "

Chris Jericho

By April 2021, after falling behind in the ratings, McMahon was done fighting over Wednesdays. WWE extended its agreement with USA Network and moved NXT to Tuesdays. Soon after, Khan would further encroach on McMahon's turf, adding a second show to his lineup to air right after *SmackDown* ends on Friday nights. By then, Danielson's WWE contract was up. He decided to sign with AEW.

Britt Baker wouldn't be able to wrestle for WWE. The problem isn't her skills or shtick—it's her day job. After Khan recruited her from the indie wrestling scene in 2021, she catapulted to stardom as Dr. Britt Baker, D.M.D., becoming famous for her swagger and bloody performances. In real life, Baker had also recently gotten her dentistry degree, and she was determined to straddle her two careers. WWE wrestlers have been fired for having side hustles, whereas Baker is allowed to fly home to Florida after a match so she can work on teeth the next day. "I had a cut on my head. I had a black eye. I looked a mess," she says of a recent day back at her office. "Some of my patients asked, 'What happened to you?' "

Refugees from WWE say that Khan has given them more power over their careers than they've ever had and that his flexibility has been essential to attracting and holding on to talent. Moxley and Danielson both cherish the creative freedom, like no longer having to read scripts in the ring as they did in WWE. That's not to say everyone at AEW is happy. Cody Rhodes, one of Khan's original signings who also served as executive vice president (the industry has a peculiar tradition of its wrestlers doubling as execs), jumped ship after helping build the business for three years. Rhodes's exit caused an uproar among the "dirt sheets," the tabloid-style wrestling newsletters, blogs and magazines that chronicle all the backstage drama. But by summer, when the McMahon scandal broke, the dirt sheets had something far juicier to gossip about. Khan tweeted, fueling the fire: "I'm grateful to now be the longest-tenured CEO in pro wrestling."

Khan wouldn't say whether he thinks McMahon's surprise return is good or bad for AEW. In a securities filing after McMahon's initial departure, WWE admitted that the changes at the top of its management structure were "extensive" and that its CEO's exit could impact its bottom line. With the 77-year-old executive back, investors are upbeat; shares spiked in January to their highest level since 2019.

But WWE's TV agreement is set for renewal in 2024, and the company is gunning for its most lucrative media deal yet. At a Wells Fargo & Co. summit in November, its executives said WWE is looking at the marketplace for its pay-per-views—now rebranded as "premium live events" since they're streamed on NBC's Peacock for a subscription fee—in several international regions as it preps for talks in the US. Of course, that equation might change if McMahon does end up selling the business, which could fetch up to $8 billion and would likely happen in the next six months, according to analyst estimates. Media giants such as Comcast and Walt Disney Co. have been floated as possible buyers, and WWE has denied reports that a Saudi Arabian sovereign wealth fund is in the running. Could Tony Khan's family buy it outright? It's possible, but the price is likely too steep without partners to help finance it.

AEW's television contract, which was for $175 million according to the *Wrestling Observer*, expires at the end of the year, with an option for 2024. Meanwhile, Khan is gearing up to release *Fight Forever*, AEW's first video game, in February, to compete with the long-running *WWE2K* franchise. As usual, he hasn't been stingy with funds, spending tens of millions of dollars to produce and market the game—and tens of millions more signing new wrestling talent, according to a person familiar with the company's financials, who asked not to be named. In November, Khan brought in Jeff Jarrett—a '90s pro wrestler and veteran wrestling exec who at age 55 still hits the occasional foe over the head with an acoustic guitar—as director of business development. Double J's job is to expand AEW's live events in smaller markets, mainly nontelevised "house shows" at local venues across the US.

One week after the show in Queens, AEW's traveling crew is preparing for its next televised match on the campus of Temple University in Philadelphia. Several hours before the wrestlers go on air, the vibe isn't all that different from backstage at a theater. In costume or in street clothes, wrestlers chat with each other in the hallways or grab a bite from the catering room. Those soon to compete find a quiet corner amid the clutter of production equipment to plan and practice moves.

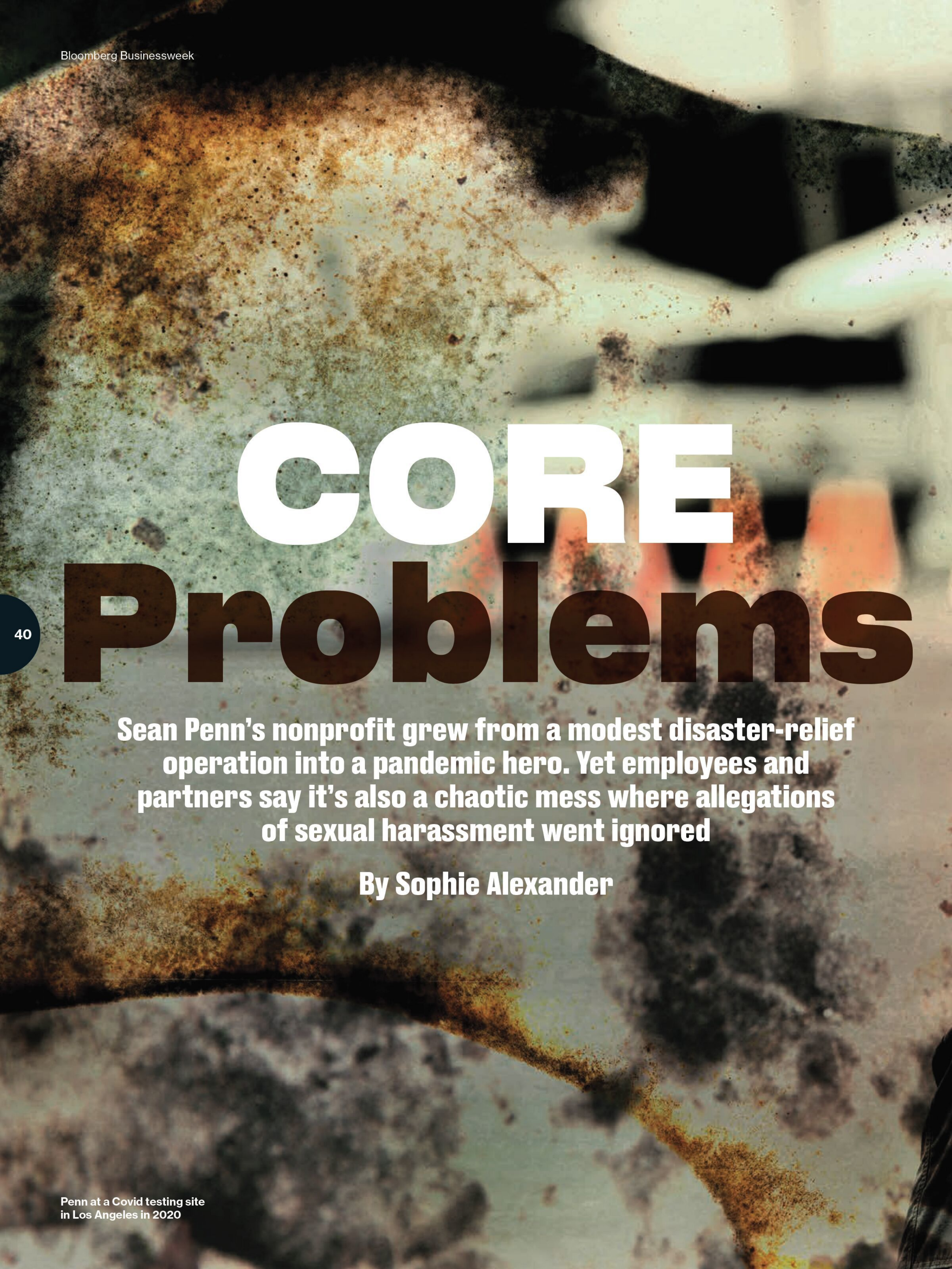
AEW used to list planned matches on a whiteboard, but it had to stop when the info began leaking to the public. After a show in September, the dirt sheets caught wind of a backstage brawl between several executives and the big-money former WWE star CM Punk, complete with chair-throwing and biting. It was a real fight, the *Wrestling Observer* reported. Was it, or was it kayfabe? Ⓑ

A wrestler preps for a match

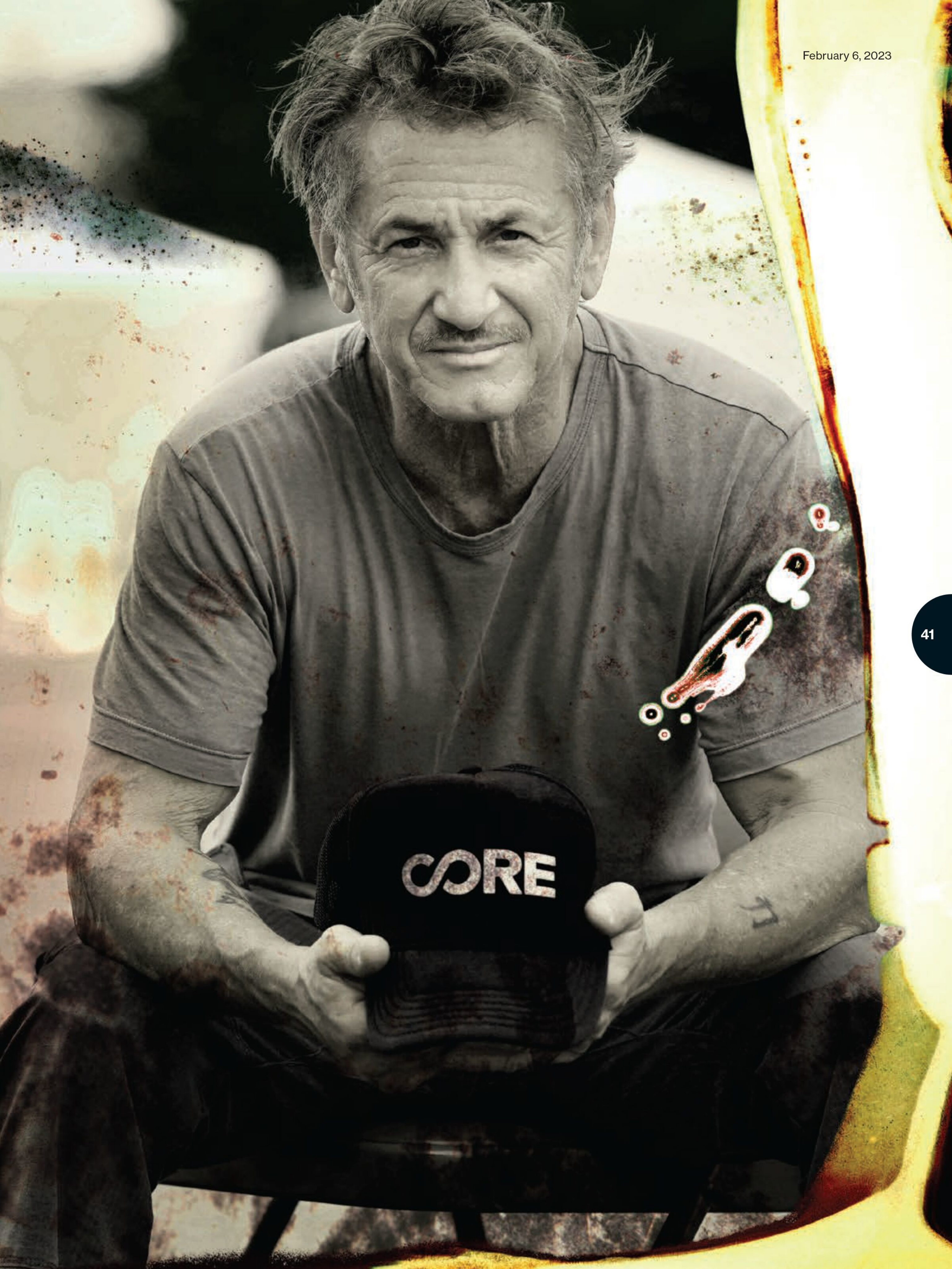
CORE Problems

Sean Penn's nonprofit grew from a modest disaster-relief operation into a pandemic hero. Yet employees and partners say it's also a chaotic mess where allegations of sexual harassment went ignored

By Sophie Alexander



Penn at a Covid testing site in Los Angeles in 2020


CORE

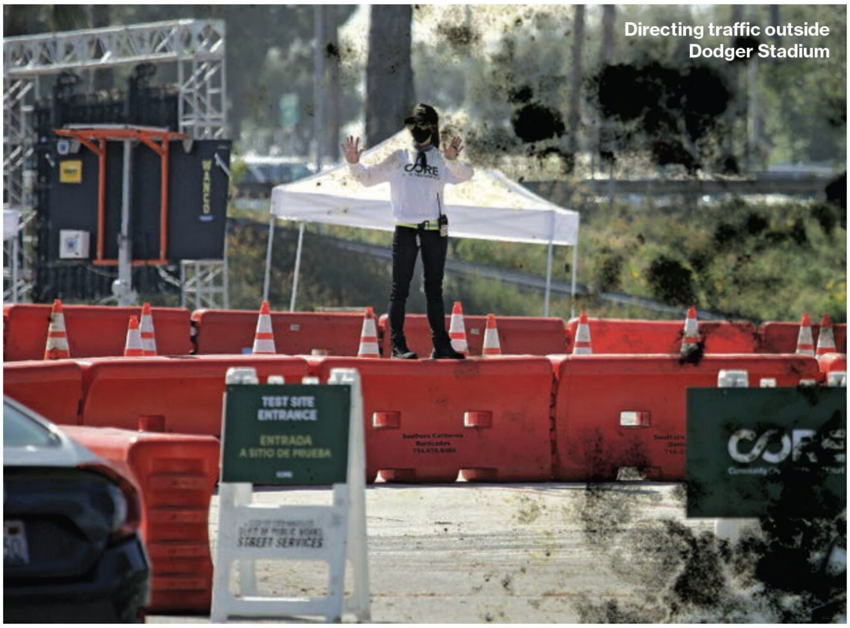
Sean Penn didn't have to do any of this. His biggest supporters and detractors can agree on that. A little over a year ago, his party at Soho Beach House, a private club in Miami Beach, was the hottest event at Art Basel, the annual international fair. The beachfront venue was packed with around 200 of the actor-turned-activist's friends and acquaintances, including Leonardo DiCaprio, pop star Anitta and Delphine Arnault, heir to the biggest fortune on Earth. Later in the evening, Anitta sang *Girl From Rio*, and a charity auction raffled off NFTs and an Andy Warhol sketch. All told, the party raised $1.6 million for Penn's nonprofit, CORE Response, that invitations and promotional materials said was earmarked for its Covid relief efforts in Latin America. A CORE employee involved in the fundraising says Anitta hosted the event on the condition that some of the money would go to her home country of Brazil, the only place in the region where CORE had any Covid relief programs of note around that time. The backdrop for the event was a massive map showing where CORE promised to put the money to use.

Besides being a fundraiser, this was a sort of victory lap for Penn's nonprofit. During the pandemic, CORE transformed with incredible speed from a Caribbean-focused disaster relief charity with around a dozen employees into the de facto Covid response team for Los Angeles. It raised close to $200 million; put 3,000-plus people on its payroll, more employees than the Bill & Melinda Gates Foundation; and co-ran the testing site at Dodger Stadium, among the largest in the US. Through the pandemic's darkest days, CORE administered millions of tests and vaccines and saved lives. When the delta variant ebbed, it wound down much of its ground-level staffing in Los Angeles and other US cities and started looking for new challenges. The Latin America fundraiser shows how it has struggled to find clear new footing and stick to it.

CORE didn't direct any of its Art Basel haul to the region until almost six months later, according to internal documents viewed by *Bloomberg Businessweek*. During staff conference calls, Chief Executive Officer Ann Lee, who runs CORE's day-to-day operations, repeatedly said the nonprofit could use the funds for other projects instead, according to three employees on the calls. (Like most of the 38 current and former employees *Businessweek* interviewed for this story, they spoke on condition of anonymity because they've signed confidentiality agreements, because they're afraid of retaliation or both.) Current and former employees say they had to spend months pushing their bosses to send the money as promised before Chief Operating Officer Jérôme Lebleu sent an email outlining how it would be used in Brazil. In a September interview, Chief Business Officer Matt O'Connell said the money raised at Art Basel went to work on Covid response in Rio de Janeiro. But internal documents show that CORE shut down its last Rio vaccine sites the day before the fundraiser.

Asked for clarification, a CORE spokesperson said in a statement that the money raised at the Art Basel event was sent to its intended destinations throughout the region. But the COO's email shows that of the $1 million netted from the event, CORE dedicated none directly to Covid relief. Instead, it appropriated $750,000 for a broader range of spending in Brazil, including $90,000 to pay its only employee there and $400,000 for unspecified "programs," and kept $250,000 to cover overhead and indirect costs. "We are revising our plans for Brazil in line with our desire to conserve cash," Lebleu wrote. This was well short of the $1.6 million pledged at the party because of the event expenses and because several pledged donors, including DiCaprio, hadn't paid up, according to a 2022 internal spreadsheet and an employee who was tasked with collecting the money as recently as September. A DiCaprio representative says he paid the $50,000 he pledged, but wouldn't say when. A spokesperson for Anitta didn't respond to requests for comment.

The dozens of current and former employees say the gaps between CORE's stated goals and its actions stretch much further. *Businessweek*'s investigation shows that CORE has left aid shipments sitting unclaimed for days or returned to the donor because no one was there to handle them; frustrated partners with lax ground-level work and loose management of multimillion-dollar federal grants; and omitted certain information about how it spends its money on its tax forms. CORE is on its fourth finance chief since 2020. Its latest available financial audit, conducted on its 2020 finances by accounting firm Windes Inc., found seven areas of concern. Employees also say that allegations of sexual battery and harassment by CORE staff and partners have gone unaddressed, and that many who've spoken out have faced retaliation. Several have filed employment lawsuits.



Directing traffic outside Dodger Stadium

Since September, CORE’s lawyers have repeatedly delayed a trial date with the National Labor Relations Board, over a Penn email that the agency claims threatened employees who publicly criticized working conditions.

CORE, which declined to make Penn, Lebleu or Lee available for an interview, said in its statement that the NLRB complaint is “overzealous and ill-advised,” adding that “CORE stands by every word in Mr. Penn’s email.” O’Connell, the chief business officer, says CORE has adequately addressed all sexual misconduct claims, and he denies the employee allegations that it has mishandled donor funds. But he acknowledges that the operation grew too fast and had trouble managing its finances. “Some of our management systems at the beginning of the pandemic were insufficient in scope and scale to meet all our organizational needs,” O’Connell said in a four-page written response to *Businessweek*’s questions about the audit. “Admittedly, there were inefficiencies and errors.”

During the September interview, O’Connell said he was unaware of the audit’s findings but that what matters most are CORE’s contributions to its central missions. “The most important thing to our leadership, to Sean and Ann, is that we respond to the pandemic,” said O’Connell, a former Peace Corps volunteer who’d been an orthodontics technology executive before joining CORE full time in 2020. “The urgency of the pandemic didn’t allow for the months of an implementation of systems that can handle an organization this large.” These problems, he said, are now solved.

Yet CORE staffers say the nonprofit is continuing to mismanage funds and ignore or minimize employee complaints. A current employee says executives are using the nonprofit’s money to pay for a range of inappropriate expenses, from needlessly lavish dinners and hotel rooms to traffic tickets, and that in a recent meeting Lee told the team to lighten up on the expense rules. (CORE denied that Lee said this and stressed that its expense policies follow government guidelines.) “It’s just the same garbage,” says Sam Hilsman, who quit as CORE’s director of technology in September, partly because, he says, leadership ignored his concerns about related financial issues. “There’s email-based invoice approvals. There’s just stuff that isn’t appropriate for an organization of this size after this long. I tried to explain this to them two years ago.”

Hilsman and other current and former employees say CORE’s leadership team spends more time worrying about its press than its management. (To take one example, CORE, which said in its statement that it’s proud of its work, has also acknowledged it sought to learn more about the details of this article from sources it directed to *Businessweek*.) Some recent nonprofit partners say much the same.

As the organization has expanded into hurricane-stricken Florida and Puerto Rico as well as into Ukraine, its first active war zone, CORE is continuing to aggressively raise funds without necessarily delivering meaningful aid, according to employees and local partners. “They stood on the outskirts of our efforts with their video cameras and filmed what we were doing as if it was them,” says Rob Gaudet, founder of Cajun Navy Ground Force, which worked alongside CORE in Florida to provide relief in the wake of Hurricane Ian in October. He says his experience with CORE left him frustrated and feeling taken advantage of. CORE said it was unaware of this complaint and that the use of photographers “for an emergency response organization is critical and standard practice.”

> **“They stood on the outskirts of our efforts with their video cameras and filmed what we were doing as if it was them”**

To date, CORE’s ascent to the forefront of disaster relief hasn’t come with a commensurate level of scrutiny. The issues it has allegedly struggled with aren’t exactly alien to other US nonprofits, but there’s been little public review of its massive rise, much of which has been funded by taxpayers as well as the Art Basel set. Many people, especially residents of Los Angeles, owe Penn, Lee and CORE a debt for the work they’ve done during Covid. The nonprofit itself might also owe some people other things, including apologies.

Before he’d won two Oscars, when he was better known for playing Jeff Spicoli than Harvey Milk, Penn, the son of a director and an actress, was also known as the guy who’d take a swing at paparazzi and go to jail for punching an extra on a movie set. He mellowed somewhat in middle age. In 2005 he was one of many celebrities who traveled to New Orleans in the wake of Hurricane Katrina, where he helped people escape floodwaters. He was also criticized at the time for bringing along a professional photographer.

Pre-Covid, his disaster-relief efforts were most closely associated with Haiti. In January 2010, a 7.0 magnitude earthquake and its aftermath killed hundreds of thousands of people there. Penn was on the ground soon after, with plans to stay for only a couple weeks. Months later, he was still there. This was when he and Bosnian entrepreneur Sanela Diana Jenkins founded the organization that would become CORE, an acronym for Community Organized Relief Effort. For much of 2010, Penn was leading, and living in, Haiti’s largest relocation camp. He testified to the US Senate about the need for more aid and accepted, along with Bill Clinton and Anderson Cooper, a medal from Haiti’s president. After some said the aid money would be better spent by an organization with more experience and fewer camera operators, Penn said in a TV interview that he hoped the critics would “die screaming of rectal cancer.”

In Haiti, Penn also met Lee, a director there for the nonprofit Global Communities. He hired her as CEO in 2016, the year after a gala called Sean Penn & Friends Help Haiti Home was attended by Clinton, featured a performance by the Red Hot Chili Peppers and raised $6 million. With Lee at its helm, the nonprofit spent several more years operating disaster-relief efforts, mainly in Haiti and other Caribbean ▶

PREVIOUS SPREAD: PHOTO ILLUSTRATION BY 731. PENN: CHRIS PIZZELLO/AP PHOTO. TEXTURE: ALAMY (3). DODGER STADIUM: MARCIO JOSE SANCHEZ/AP PHOTO. TEXTURE: ALAMY

◀ countries. In 2019, Penn made Lee an honorary co-founder and changed the organization's name officially to CORE.

By 2019, though, $6 million was just about CORE's revenue for the whole year. At that point, according to the nonprofit's tax forms, it had been losing money for three straight years, employed 18 people and listed zero volunteers. In its statement, CORE attributed the decline to waning global interest in Haiti relief.

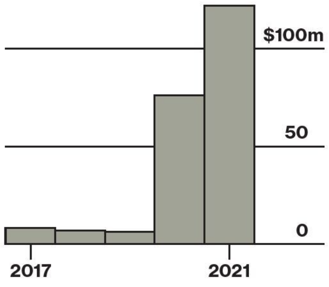
All of this makes CORE's pivot to Covid even more remarkable. For convoluted political reasons, the City of Los Angeles doesn't have a public-health department. Its roughly 4 million residents theoretically have access to the public-health services provided by Los Angeles County, but that department serves about 10 million people, including a great many residents of wealthier suburbs who are good at cutting lines. In the early days of the pandemic, when personal protective equipment and tests were scarce and many people were still wiping down their groceries, the city had only a handful of staff doctors at its disposal and no help from the county in setting up testing sites, says Jeff Gorell, who was a deputy mayor at the time. Then Penn used his connections to California Governor Gavin Newsom to make then-Mayor Eric Garcetti an offer.

"Along came Ann Lee and Sean Penn," says Gorell, a Navy captain and supervisor of California's Ventura County. "They said, 'Let us do it, let us man it and operate it, and we'll do it with our own donations.'" At first it was one testing site, then two, then three. By summer, CORE was running sites all over the city with the Los Angeles Fire Department. Initially, CORE relied on gloved, masked, hazmat-suited volunteers, but it quickly began hiring them as full-time employees. Soon they were helping conduct tens of thousands of tests a day at sites across LA, including en masse drive-thru testing at Dodger Stadium. "It was a blessing," Gorell says. "If CORE wasn't there, the city of LA never would've had testing on the level that it did. There was no Plan B."

CORE was able to move so quickly in LA, and several other cities, thanks largely to tech money. Billionaire Jack Dorsey, then the CEO of Twitter Inc. and a Penn buddy, gave the nonprofit $10 million for Covid aid in May 2020, then an additional $20 million a month later. This was in keeping with other philanthropic efforts by Dorsey, who's also sent money to nonprofits affiliated with Eminem, Jaden Smith, Jay-Z and Rihanna, but the CORE funding was on a scale Penn and Lee's team had never seen. The donations snowballed. After bringing in $6.6 million in 2019, CORE reported revenue of $76 million in 2020 and $122 million in 2021, according to its latest tax forms.

CORE Explosion

Annual revenue



DATA: COMPANY REPORTS

All told, CORE helped conduct millions of tests, mostly in Los Angeles. When Covid vaccines became available, it administered millions of those as well, in LA and several other cities. It was a stunning mobilization of aid, a success without many clear comparisons.

But the model also had flaws. Private funds for public needs rarely solve underlying problems, says Hilde Van den Bulck, a Drexel University professor who wrote a book on celebrity philanthropy. "You have to worry if you have to rely, as a state, let alone a country, on ad hoc solutions to these kinds of things," she says. "It's not uncommon for celebrity-endorsed organizations to be a bit of a mess."

Sarena Serrano was 23 years old when she started at CORE in June 2020. She initially signed up as a volunteer, but she soon had a full-time job administering Covid tests at Dodger Stadium with many people in their first jobs out of college. "It was like a big summer camp for adults," Serrano says, adding that she was inspired by having Lee, a woman of color, as her CEO. But the workplace was also like summer camp in a bad way. Eight CORE staffers at the stadium say LAFD firefighters working there routinely sexually harassed their female peers. One says the firefighters called them "CORE whores." Serrano, in a lawsuit against CORE and others, says LAFD Chief Jaime Lesinski, who was running the department's operations at the stadium, repeatedly sexually battered and harassed her for months. Other current and former employees, as well as documents shared with *Businessweek*, corroborate her allegations.

"I had LA's battalion chief stroking my ass every time he went by me," Serrano says. At other times, she says, echoing allegations in her eventual legal complaint, he suggested she'd spent the previous night performing sex work. "I cried every day about it, because I didn't know what to do," she says. "I was scared."

At the time, the only HR reporting process current and former CORE employees say they were aware of consisted mainly of an email address and an anonymous, public Google Forms spreadsheet for run-of-the-mill safety complaints. Serrano says she reported the incidents to her manager and, after hearing nothing for weeks, told Lee directly. "I'll never forget it," she says. "I was crying to her, telling her about how Lesinski was groping me in a cubicle, and she goes, 'Sarena, have sympathy for me. Think about me and what I'm going through. Lesinski is my friend. Can you imagine how I feel? I've known about this for weeks.'" (Another person who was present confirms this exchange.) About a month later, CORE fired Serrano in what she alleges was retaliation for speaking out. She has sued CORE for wrongful termination, Lesinski for sexual battery and gender violence, and both CORE and LAFD for allowing sexual harassment in the workplace, among other allegations. Her complaint against CORE is being handled through arbitration.

Lesinski and the LAFD, whose case is ongoing, didn't respond to requests for comment. CORE said in its statement that after Serrano's conversation with Lee, "prompt action was taken to remove Lesinski from the site and an investigation was commenced." (Lesinski, who remains an active LAFD battalion chief, is now running a fire station near LA's Eagle Rock neighborhood.) Once management was alerted to the alleged culture of harassment at Dodger Stadium, CORE said, "it took appropriate remedial measures."

But two other CORE stadium workers, one of them a manager, say Lee and COO Lebleu knew these problems were ongoing and did nothing for more than a month. Not knowing where else to turn, one emailed Lebleu in July raising concerns about sexual harassment at the stadium, according to a copy of the email viewed by *Businessweek*. This person followed up that August in another email seen by *Businessweek*, saying the situation had worsened. That month, after someone wrote in sharpie in an on-site port-a-potty that one of CORE's own managers, who current and former employees say was sexually harassing staff, "doesn't like women," Lee visited the stadium. Several employees say that in a staff meeting, she defended the site leaders, including Lesinski, and argued that CORE employees should be grateful for the ways she was looking out for them. These employees say she focused on the free food and coffee.

CORE
Organized Relief Effort
Lee and Penn

Soon after, a new complaint landed in the anonymous Google spreadsheet, where multiple submissions also alleged Lesinski was sexually harassing staff. "You have effectively said 'We don't believe you,' " the complainant wrote, according to a copy of the spreadsheet viewed by *Businessweek*. "Free coffee is NOT the answer."

By then, CORE had begun expanding its operations to more than 20 locations, including Atlanta, Chicago and New Orleans, and winning tens of millions of dollars in federal grants to repeat its Dodger Stadium success. What CORE wasn't doing was setting up the kinds of rigorous accounting processes typical of an operation spending tens of millions of taxpayer dollars a year, according to several current and former employees, some of whom have served in leadership roles at peer institutions. Federal grants come with much stricter reporting requirements than donations from billionaire friends. CORE was using Excel spreadsheets for its roughly 2,000-person payroll and the small-business software QuickBooks for its accounting. In fact, as of September, it was still using QuickBooks, according to O'Connell, the chief business officer. "It's not ideal," he said in the interview. "You make it work."

O'Connell acknowledges that CORE's 2020 financial processes needed an overhaul. In reviewing its finances for that year, the firm Windes found that CORE was missing financial documentation and basic oversight of its payroll and expenses. None of Windes's seven points of concern was material enough to lead to repercussions, but taken together, they start to look a little dizzying: tens of thousands of dollars of expenses not accounted for; hundreds of thousands in expenses misclassified; hundreds of thousands recorded under the wrong year; missing payroll approvals and donation documents; miscalculations in accrued vacation time; and missing grant documentation from, separately, the Treasury and Health & Human Services departments. "That's a lot of findings," says Stefanie Cohn, a partner at accounting firm Marcum LLP in Washington, DC, who reviewed CORE's audit at *Businessweek*'s request. "On a bad client, I have four or five." In addition, internal financial documents viewed by *Businessweek* show that CORE didn't list its largest fundraiser on its 2020 or 2021 tax forms, and that its official top vendors for 2020 don't quite match its own records, either.

CORE didn't answer a question about those internal discrepancies. O'Connell says he took over the finances that fall and made sure all the money was accounted for, though he added: "I've never worked in a company that's been shipshape."

Yet CORE's finances have remained "structurally unsound," according to a former employee who left last year after being hired to help address some of these problems. The person oversaw grants from the US Health Resources and Services Administration and says the tracking of payroll and expenses was consistently messy. According to two people familiar with the matter, the nonprofit Partners in Health, which was administering a multimillion-dollar federal grant given to CORE, repeatedly warned via emails that CORE's financial reporting was unacceptable. Partners in Health no longer works with CORE, in part because of this experience, one of these people says. A Partners in Health spokesperson declined to comment. CORE noted in its statement that, ultimately, "all of CORE's financial and programmatic reports were reviewed and accepted by PIH."

A year after O'Connell says he reformed CORE's accounting practices, toward the end of 2021, an employee named Elvis Ramirez had to repeatedly tell CORE to stop paying him months after he'd left the organization. "I had to reach out multiple times, and they never got back to me," Ramirez says. The parties have now set up a payment plan for him to return the money. "That's a huge issue," says Cohn. "I'm sure that for every employee that reported that they were getting paid and not working there, there's probably two that didn't." CORE said in its statement that what happened with Ramirez isn't a widespread issue.

Hilsman, the former CORE employee who quit this past ▶

LEE AND PENN: CINDY ORD/GETTY IMAGES. TEXTURE: ALAMY

◀ September, says he also noticed financial discrepancies on his team, which was creating an app. He says in his last few weeks there he noticed random travel expenses attributed to his team, including rental car bookings in various cities, and that his questions to his manager about the expenses were met with silence. "Where did all that money go?" he asks. CORE said it "reviews each program's profit-and-loss statement monthly to ensure accuracy."

Current and former employees say the common denominator is Lee, who makes the vast majority of the nonprofit's operating decisions, including selecting which disasters to respond to, how long to stay in the area and who does what. While Penn remains chair of the board, they say he has little role in CORE's day-to-day work. Lee has said CORE owes its high profile to Penn's fame, for better or worse. "One of the things that I struggle with is our visibility because of Sean," she told staff during a recent organizationwide conference call, according to a recording of the call heard by *Businessweek*. "We get access to so much publicity and visibility. We can go on CNN, and it really raises the profile of our organization." The catch, she said: "We also get very undue sort of scrutiny." In October, according to a copy of a presentation seen by *Businessweek*, CORE staffers met with a consultant to discuss how to brand the charity without relying on Penn.

Starting in 2021, after the parking lot of Dodger Stadium was returned to the Dodgers, CORE wound down most of its testing and vaccination sites and began laying off employees. In the return-to-office era, the nonprofit had a bit of an identity crisis, and current and former employees who were there at the time say it seemed under pressure to figure out what was next.

In September 2021, images circulated on social media of US border patrol officers chasing down on horseback some of the thousands of Haitian migrants in and around Del Rio, Texas, who were fleeing the aftermath of an earthquake. Lee retweeted a couple of those posts and dispatched vans full of employees to Del Rio. The idea was to hand out a few hundred toiletries kits and administer Covid tests and vaccines to refugees as they crossed the border, according to two people who were involved in relief efforts there. But CORE's team wasn't allowed to conduct any Covid testing or vaccinations in Texas, one of these people says, because nobody coordinated the required labs or state approvals. Current and former employees say that while the trip was considered a failure internally, CORE left with photos and videos that made it seem like a success. CORE didn't comment on why the team didn't perform tests or vaccines.

In September, Lee held what some employees now call the "snitches get stitches" staff meeting

No humanitarian aid group is perfect, and the Del Rio fiasco could be interpreted as a one-off mistake. But employees, and those at other nonprofits, say incidents like this one have become more common as CORE has shifted its attention away from the pandemic. Ever since then, employees say, CORE has repeatedly arrived at the site of a humanitarian crisis with little planning, taken photos to boost its profile and raise money, then moved on. CORE reiterated that it's proud of its work.

After Hurricane Fiona devastated Puerto Rico in September, CORE sent a single employee to the island and hired a local consultant to assist her, according to Laura Domenech, a CORE partner at Ponce Health Sciences University in Puerto Rico, and another person familiar with the situation. Meanwhile, it kept fundraising. By early October, CORE had raised at least $200,000 in cash for Fiona response, according to an internal document viewed by *Businessweek*, plus dozens of boxes of such supplies as solar-powered lanterns, according to Domenech and the other person. By the time the supplies arrived, though, the sole official CORE employee in Puerto Rico had flown to Florida to respond to Hurricane Ian, so CORE asked Domenech to help receive and store the supplies. Domenech says the shipment sat unclaimed for about a week. CORE said it prioritizes local hiring and that it collected and delivered the items as soon as possible.

In Florida, the story was much the same, says Cajun Navy's Gaudet and another person familiar with CORE's work there. In the city of Fort Myers, Gaudet's team set up a camp in a Big Lots parking lot where CORE operated for a time. In October, a donated shipment of batteries and other supplies worth tens of thousands of dollars arrived there, but nobody was waiting for it, because CORE had relocated to a different spot after the supplies had been shipped. No one took inventory, and part of the shipment was returned to sender. CORE said taking inventory would have unduly delayed the distribution of the supplies and that it worked with the shipper, Amazon.com Inc., to make sure the rest of the supplies eventually made it to the new location.

Lately, one of CORE's biggest fundraising successes has been its response to the war in Ukraine. Penn's timing was uncanny: The day Russia invaded, he has said, he was with Ukrainian President Volodymyr Zelenskiy, shooting a documentary for Vice. The following week, Penn was on CNN with Anderson Cooper, talking about his relationship with Zelenskiy and CORE's work in the region. "We're distributing hygiene kits, we're giving cash assistance, water to refugees as they come through," he said. "We need assistance with CORE. We've never been very good at getting on the media front." That media blitz, which also included appearances on MSNBC and Fox, led to millions raised from individuals online alone, according to an employee working on CORE's grants team at the time.

But here, too, CORE's deployment of resources hasn't been anything like its Covid mobilization, according to three employees who've worked either directly in Ukraine or at one of its staging areas in Poland or Romania. One, who was involved in the early response, says CORE first went to Poland with a handful of people, including two professional photographers, and

Penn and Zelenskiy

little planning. Two of the people say safety was given short shrift and that even basic security protocols, such as buddy system check-ins, were lax. CORE said it's "deeply committed" to staff safety and works to mitigate risks.

Jan Luc Willaert, who started with CORE as an LA volunteer during Covid and is now running all its Ukraine relief efforts, says his team of about 20 people ensures employees are safe with help from local partners. He says that while CORE has never technically operated in a war zone before, places like post-earthquake Haiti trained many longtime staffers to deal with extreme danger and stress.

It's unclear, though, just how many longtime staffers CORE has. Total headcount now stands in the hundreds, a fraction of its peak, and employees say every nonmanagement job carries some degree of precarity. In Los Angeles, a handful of employees were laid off this past summer even though CORE had just received a million-dollar grant from the Elevance Health Foundation that should have guaranteed their jobs for two years. Hilsman and two other people familiar with the layoffs say the staffers were offered their jobs back at lower salaries than what Elevance had guaranteed and refused to take the pay cuts. O'Connell denies this, saying the team was laid off because CORE wanted different people in those jobs. A spokesperson for Elevance declined to comment on whether it was aware of CORE's staffing changes.

Apart from the finance chief, one of the few constants at CORE is the leadership. Penn is still the best-known face of the organization, and Lee is still CEO. The seven-person board of directors remains mostly Penn and his circle, including his agent Bryan Lourd, filmmaker Fernando Sulichin and actresses Patricia Velásquez and Soleil Moon Frye. In its statement, CORE said a question about the board's makeup suggested "disrespectful dismissiveness" of entertainers.

Many former employees are trying to move on with their lives after CORE, describing their experiences as traumatic. Some say the stress of working for CORE led them to lose unhealthy amounts of weight or take medical leaves. Some current and former employees say they're frustrated that there's been no accountability for the management team's blunders, and that they feel like their good intentions and hard work have been taken advantage of to make Lee and Penn look good. One former employee sent a letter to the California attorney general last year saying they have concerns about the nonprofit's use of grants, according to a copy of the letter shared with *Businessweek*.

In California the attorney general has "very broad authority" to make sure charities are serving the public benefit, says Eric Gorovitz, a nonprofit attorney at the law firm Adler & Colvin in San Francisco. Speaking generally, he says things like misuse of donor funds could warrant an investigation. At the very least, says Cohn, the Marcum auditor, CORE's management needs "to take a step back and get the right controls in place." The attorney general's office declined to comment, saying it's unable to discuss complaints it has received.

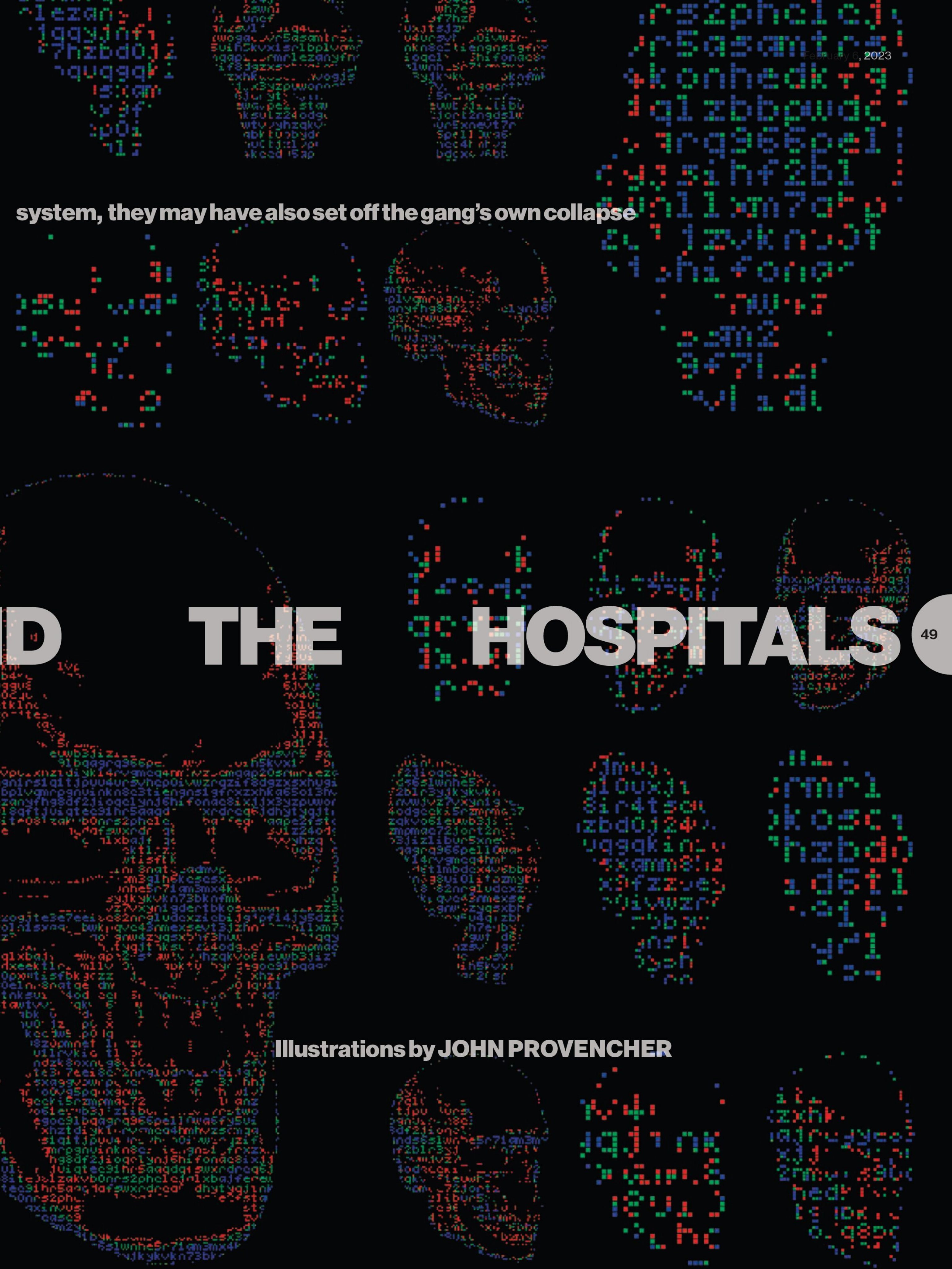
In September, following early reporting by *Businessweek*, Lee held what some employees now call the "snitches get stitches" staff meeting. She told the gathering that talking about the nonprofit with outsiders was "just not cool," and that staying quiet is part of their contracts, which is only true for some employees. "We did the right thing, and we did it the right way," Lee says in a recording of the meeting shared with *Businessweek* by multiple employees. "There's not a moment I regret." —*With Rachel Adams-Heard and Wojciech Moskwa*

PENN AND ZELENSKIY: UKRAINIAN PRESIDENTIAL PRESS OFFICE/UPI/SHUTTERSTOCK. TEXTURE: ALAMY (2)

When cybercriminals took down Ireland’s health-care

THE HACKERS AN

By RYAN GALLAGHER



system, they may have also set off the gang’s own collapse

D THE HOSPITALS

Illustrations by **JOHN PROVENCHER**

At first the attack on Ireland's public-health system fell into a depressingly familiar pattern. In March 2021, hackers duped an employee into clicking on an innocuous-looking spreadsheet, giving them access to its network. On May 14, they rendered most of the 70,000-device system inoperable by encrypting reams of its data. Then they demanded $20 million—which would have been one of the biggest ransomware payouts ever—to reverse the action.

Because the hackers compromised systems that 54 hospitals and about 4,000 other locations needed to operate equipment such as radiation therapy machines and keep track of which drugs to administer to which patients, the immediate impact was terrifying. As doctors and nurses scrambled to improvise ways to keep sick patients from dying, Ireland's government took a hard line. "We're very clear we will not be paying any ransom or engaging in any of that sort of stuff," then-Prime Minister Micheal Martin said in a televised appearance the day the computers began seizing up.

But the perpetrator, an infamous Russia-based gang called Conti, had done this hundreds of times before, and it proceeded as though its victim would have to give in eventually. Conti had already set up an online chat portal on the dark web, where it explained to representatives of Ireland's public-health agency, the Health Service Executive, or HSE, what it was up against. "We infiltrated your network and stayed in it for more than 2 weeks," it wrote in messages reviewed by *Bloomberg Businessweek*. Conti said it had stolen 700 gigabytes of data, including personal information about patients, employees and contracts, and shared a sample of sensitive documents with the HSE to prove it wasn't bluffing. "When do you expect to proceed with the payment?" the hackers asked.

With Irish officials still holding out as of Wednesday, May 19, Conti issued an ultimatum: "We will start to sell and publish your data on Monday." Then, mysteriously, it balked. The following day it sent a decryption key to the HSE, allowing staff to begin the long process of recovering its data. "We are providing the decryption tool for your network for free," Conti wrote. It stressed that this wasn't the end of the matter, adding that the HSE "should understand that we will sell or publish a lot of private data if you will not connect us and try to resolve the situation." In the end, though, Conti never put any data up for sale, and it stopped communicating with the HSE. The group seemed to have called off its attack entirely, without ever receiving a ransom.

The cyberattack—the largest ever on a health-care system—was nevertheless devastating. It's impossible to quantify how much physical suffering it caused or to attribute any deaths during this period directly to the hackers' actions. But interviews with more than two dozen people, including HSE executives, doctors and nurses, as well as law enforcement and cybersecurity experts, illuminate the resulting terror and disruption. "Treatment was greatly slowed, and we were managing patients in the blind without access to previous information in many cases. It is self-evident that carried great risk," says Colm Henry, the HSE's chief clinical officer. "We were plunged into darkness." Nearly two years later, the attack has left an enduring mark on the HSE. The organization is implementing a plan to modernize its computer infrastructure and toughen its cybersecurity at a cost that's likely to extend to hundreds of millions of euros.

According to a disillusioned former member who spoke to *Businessweek*, the attack also wreaked havoc on Conti. Up to that point, Conti had mostly inflicted monetary or reputational damage, and some of its members were spooked by the more visceral consequences of the attack on the HSE, according to internal chat logs the former member shared and interviews with others familiar with the group. An attack that could have led to Conti's biggest haul instead showed which lines it wouldn't cross.

A vulnerability in the HSE's computer network opened up during a series of improvements implemented at places such as the National Maternity Hospital, a 125-year-old institution housed in a massive brick building on Dublin's Holles Street. In 2019 the facility—one of Europe's busiest maternity hospitals, caring for more than 8,000 women and babies annually—replaced its paper-based medical records with a digital system.

Similar transitions were happening across the HSE. On normal days, the upgrades were helpful—things ran more smoothly when doctors weren't trying to track everything with pen and paper. But they introduced a significant point of potential failure: Centralizing digital records meant a computer issue could leave doctors and nurses across the country cut off from basic information they needed to do their job.

Sure enough, within hours of launching the attack, Conti had hampered the majority of the HSE's computer infrastructure, undermining its ability to carry out basic day-to-day functions. Many X-rays and CT and MRI scans had to be postponed nationwide, as did cardiac investigations, endoscopies, radiotherapy services, gynecology appointments and blood tests. Thousands of appointments were canceled.

Mary Brosnan, the National Maternity Hospital's director of midwifery and nursing, recalls being "completely at sea." Hospital staff had to ask patients what they could remember about their medical histories and medication routines, then create new handwritten records. This was risky, given that not all patients can recall such information reliably and some have trouble communicating in English. "It was really frightening," Brosnan says. "Our biggest worry was, if we do an operation on a woman, and we don't know enough about her, and she dies in theater. God forbid, because of blood loss, or she has a stroke because we didn't realize she had this or that wrong with her."

> **"We were back to calculators and bits of paper trying to work out drug dosages. It is life-changing if you make a mistake"**

The hospital's neonatal unit relied on computers to produce pharmaceutical calculations for premature babies, some of whom were on ventilators and in need of critical care, so the hack left it without a critical tool. "We were back to calculators and bits of paper trying to work out drug dosages," Brosnan says. "It is life-changing if you make a mistake—life-changing for the family and life-changing for the staff member, too."

At St. Luke's Radiation Oncology Network in Dublin, one of Europe's largest radiation treatment centers for cancer patients, staff rushed to form a plan to care for its 300 patients. The first grim step was to categorize them by the danger they faced from interruptions in treatment. Within hours staff had identified about 10 patients who required emergency or palliative care and relocated them to a privately run hospital whose computers were operating normally, according to Clare Faul, St. Luke's network and clinical director.

Then there were the children—nine patients from ages 4 to 14. Their treatment relied on linear accelerator machines, hulking high-energy X-ray devices that deliver radiation treatments for tumors. The attack had rendered all of the hospital's machines inoperable. Faul directed nurses to call parents to tell them their sick kids wouldn't receive therapy for an unknown period. "It was one of the most stressful things I've ever experienced," recalls Faul, a 20-year health-care veteran.

At least Dublin, by far Ireland's largest city, had resources to respond to the crisis. (Seven of the city's 20 hospitals are privately owned and don't rely on the HSE's infrastructure; they began taking in the patients in greatest need of immediate care.) Most of Ireland's cybersecurity experts are also in the Dublin area, and they were able to help hospitals there recover at least some of their functions within the first few days.

The situation elsewhere was even more dire. Vincent Jordan, e-health director at Saolta University Health Care Group, an HSE network serving the west and northwest parts of the country, says laboratory testing capacity at some hospitals collapsed. One facility that could handle 4,000 tests over a 12-hour day responded to the attack by expanding to 24-hour service, and was still only able to get through 600 daily tests with the remaining computers that hadn't been compromised.

Even before the attack, people with severe health conditions sometimes had to make long trips to the capital for treatment. One such patient, 4-year-old Alannah Foley, had an optic-nerve tumor that threatened her sight and potentially her life. A previous surgery hadn't solved the problem, and on the day of the attack her parents were bringing her 200 miles from their small-town home to Dublin to start a chemotherapy regimen at a large children's hospital on the city's south side.

In the car, Alannah's mother, Geraldine Dunleavy, heard a radio report about a cyberattack on a maternity hospital but thought nothing of it. When the family arrived in Dublin, though, it became clear that whatever was wrong was going to affect Alannah. The hack delayed her chemo treatment for a day. Worse still, the hospital where they'd been planning to continue the treatments, which was nearer than Dublin to their home, was crippled badly enough that they'd likely have to make the seven-hour trip to the capital each time.

A few weeks later, Alannah required surgery to fix a shunt that had been placed in her brain to drain fluid. While the surgery was eventually scheduled, it was only after a delay. Dunleavy remembers the excruciating wait. "They couldn't access her scans or figure out a way to do it," she says. "It seemed to go on forever."

About a week after the initial attack, a Conti hacker using the screen name Alter entered an internal chatroom and denounced it. Alter suggested that another member or affiliate who wasn't in the chatroom at the time had carried out the attack, perhaps without approval, writing, "I want to say that none of those present here have anything to do with this attack, we DO NOT attack public resources, hospitals, airports and anything like that, and we will not."

Conti was a criminal gang, but it had adopted some of the structures and practices common to legitimate technology businesses. It used a variation of a criminal business model cybersecurity experts call "ransomware as a service," in which a group leases out malicious software for use by other criminals. In Conti's case, it owns the software but maintains a more active role in the attacks themselves, treating hackers almost like employees, by managing them and paying them wages.

Its workforce was divided into multiple teams, each with about 10 or more people and its own team leader, according to the former member who spoke to *Businessweek*. One group collected intelligence about a company's field of activity and income, as well as details about employees, such as their contact information and personal interests. Then there were malware developers, testers who worked to bypass popular antivirus software, and a phishing team that specialized in duping people into clicking on compromising emails. There was a team of negotiators who would deal directly with victims and try to coerce them to pay the ransom, and also a supply department that purchased servers and other technical infrastructure.

At the time of the HSE hack, Conti didn't have a record of restraint. The FBI estimated that as of January 2022 the group had carried out attacks on more than 1,000 victims, receiving over $150 million in ransom, and the US Department of State is offering a $10 million reward for information leading to the identification of any of the people who had led it.

But security experts say they'd been picking up signs of discord over what behavior was acceptable. "We knew what was happening inside the group" as the attack was going on, ▶

◀ says Richard Browne, director of Ireland's National Cyber Security Centre, which investigated the attack. Browne's team had identified a subsidiary, which it suspected was based in St. Petersburg, Russia, that had developed IcedID, a malicious software hackers have used to penetrate corporate networks in other attacks. "This actor group was younger, more aggressive and less risk-averse," he says. "Our assessment is that they made themselves very unpopular within the group."

Browne says he even has names of the specific people he suspects were involved in the attack, though that does little good so long as they stay in Russia. (His investigation also concluded that the hackers didn't do a great job of covering their tracks and that the HSE's security team should have realized it had been compromised when Conti first gained access to the network in March.)

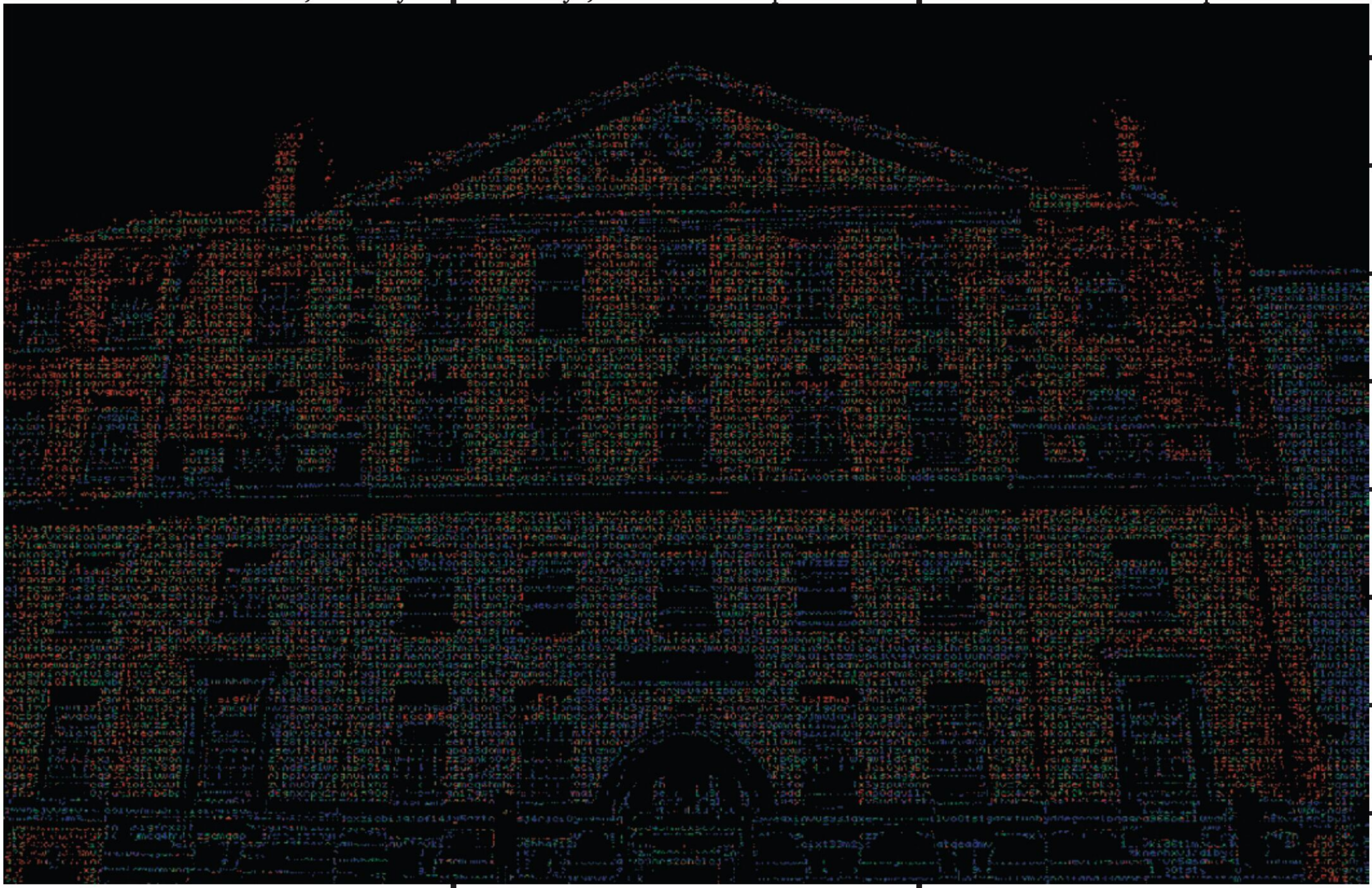
How exactly the queasiness within Conti over the HSE hack developed into a decision to call it off remains mysterious. "It exposed them to a type of attention that they might not have wanted domestically, commercially or internationally," Browne says. "I suspect it was the case here, where they cut their losses and ran."

Whatever the reason, Conti's reversal had an immediate impact. When the HSE received the decryption keys, it was in the process of trying to rebuild its network, restoring computers using backup data stored on magnetic tapes. Having the keys made fixing everything much faster, according to Fran Thompson, the HSE's chief information officer. "Without the key it would've taken magnitudes of time longer to get all those systems back," says Steven Keane, the commander in charge of the Irish Defence Forces' cyber unit at the time. "It would've been so much nastier."

Even with the keys in hand, teams from the Defence Forces, the country's military, were working as many as 17 hours a day. About 3,600 servers and 40,000 desktop computers had been compromised, and it took between five minutes and an hour to decrypt a single device, depending on how many files it contained.

One month after the hack, the HSE had recovered only about half of its servers. The electronic patient record system remained inaccessible for about six weeks. Four months after the attack, there were still problems accessing imaging systems used to assess patients and plan treatments. The HSE is now working on a plan to overhaul its computer infrastructure, as well as scanning and uploading the scores of paper medical records generated during the disruption.

Restoring computer systems didn't necessarily fix the damage done to the people who'd relied on them. Patients with serious cancers shouldn't have more than a two-day break in treatment, and delays longer than a week



↑ The National Maternity Hospital in Dublin can have a "quantifiable impact" on recovery, Faul says. A 2016 study in the *International Journal of Radiation Oncology* also found that people who miss several radiation sessions during cancer treatment have an increased risk of the disease returning, even if they go on to complete their course of therapy.

HSE staff were able to restore some systems from a backup server fairly quickly, which helped them bring four linear accelerator machines back online at St James's Hospital in central Dublin. Children at Faul's St. Luke's Hospital were transported 3.5 miles to the St James treatment center, accompanied by specialist pediatric nurses and an anesthesiologist. Each patient's treatment had to be replanned from scratch, and they resumed their radiotherapy after a two-day gap.

Adult patients with more common forms of cancer, such as breast and prostate, had a longer break of three to six days. Other treatment centers were slower to get their radiation machines back online. In all, more than 500 cancer patients across Ireland had their radiation therapy sessions interrupted. At Cork University Hospital, some patients in the highest-priority treatment category experienced gaps of up to 17 days.

The disagreements inside Conti continued after the attack ended. A month later, a member of the group who went by the name Rashaev declared in internal chats that Conti had "decided not to touch the health sector at all." But not all of the gang's hackers heeded the directive. In October 2021 a member nicknamed Dollar carried out an attack on Florida's North Broward Hospital District. The hacker said in a chatroom he'd stolen about 8 gigabytes of data from the network. (Broward later announced it had been hacked and patient data stolen but said "there is no evidence the information was actually misused.")

That incident and others infuriated a Conti gang member nicknamed Cybergangster, who fumed in internal chats about Dollar's conduct. "Let's get the dollar out of the game," wrote Cybergangster. "He is a f---ed up bastard. It's disrespectful. Two times I told him that we do not touch the medical sector."

Dollar apparently continued to ignore those rules. In February 2022, the leaked chats show, he was planning to target a cerebral palsy charity. He sought to justify the attack: "These are not doctors and no one is dying."

This infighting only came to light because of a major global crisis that split the group. Many of Conti's core members live in Russia, and it has been able to operate because it has at least the tacit support of the Russian government, according to cybersecurity experts. But some of its affiliates operate from other countries, including Ukraine. When Russia invaded Ukraine in February, Conti's leadership made a public statement of support and threatened to "strike back at the critical infrastructures" of any "enemy" who targeted Russia. Days later, an anonymous Twitter account named "ContiLeaks" began posting thousands of internal chat messages and documents online, along with the pointed message "Glory to Ukraine."

Conti disbanded in May 2022. Many of its hackers joined other gangs, including one named Black Basta and another known as Quantum, according to the former Conti member. Documents provided to *Businessweek* showed that some of the former Conti hackers were using a server to carry out ransomware attacks targeting entities in North America and Europe, including the Newark Housing Authority, a New York attorney's office, a Canadian logistics company and a Rhode Island dental office.

It was a few months after Conti disbanded that one of its former members agreed to speak to *Businessweek*. This reporter had posted a request in August 2022 to a Russian-language cybercrime forum seeking to interview people involved with Conti, and a few people replied before moderators banned the reporter. After initially requesting money, one respondent, a Ukrainian national who was furious with the group's leadership for supporting Vladimir Putin's invasion, agreed to talk without conditions.

Victims of Conti's attack have little patience, understandably, for contemplating whatever crisis of conscience their pain sparked within the criminal gang. Faul, from St. Luke's, still simmers with anger when asked about the hackers behind the attack on Ireland. She says she hopes they'll be brought before an Irish court one day. "This is the most Machiavellian, horrible thing to do," she says. "They can't be human, if they think they can take out a health service and have people potentially losing their lives—it's appalling."

The hacker, who says he was paid a regular salary of about $2,000 a month to gather intelligence on prospective targets, doesn't justify attacking the HSE or other organizations. Instead, he claims he didn't grasp the implications of his actions. Details about operations often weren't communicated to individual teams, who were walled off from one another, he says. His boss "never revealed to me the specifics of our work. He said, 'The less you know, you will live longer.' " The former Conti member adds that he didn't know about the attack on the hospitals when it occurred. "I didn't know about the specifics. But now I condemn it," he says.

Despite being confronted with the impact of ransomware work, he hasn't abandoned it. He says he lives in Russia and has no other way to make a living. "I really want to leave. But this is my only source of income," he says. "Trust me, I can do a lot in the field of information security, but all my job searches consistently fail. I really want to work and know that my work will not harm anyone." Ⓑ

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PURSUITS

A Safari Like You’ve Never Seen

A rugged new breed of trips in Botswana takes animals out of the equation. *By Brandon Presser*

The author follows his guide on a quad bike across the Makgadikgadi Basin salt pans

60
Mexican-style beer goes bold

62
The best laptop for playing games

63
An oldie but goody for making coffee

February 6, 2023

Edited by
Chris Rovzar

Businessweek.com

About halfway into our journey, the caravan of quad bikes ground to an abrupt halt along the cracked and creviced salt pans of Botswana's Makgadikgadi Basin. "This is why you're here," my guide, Super Sande, exclaimed, gesturing at the abject flatness of the Kalahari, a talc-white carpet sprouting not a single weed or thorn. He instructed our small group to each pick a direction and, forming a starburst pattern, count our steps out toward the various horizons.

Twenty steps. Fifty. A hundred. A thousand footprints etched into the sunbaked dust until I finally stopped, alone. In the extreme silence borne only in the heart of the desert, I dropped to my knees. In the colossal quiet, I could hear only my thoughts as I traced my finger over the ropes of dried mud and shards of shattered seashells and wondered if anyone else—in the history of our planet—had ever walked across the exact bit of land on which I had settled.

We were the first to try a product newly created by award-winning safari operator Natural Selection—a four-day trek across Botswana's vast, uninhabited interior, connecting the islands of granite and thick-trunked trees that disrupt the miles of otherwise flat, lifeless terrain.

Tea service at Jack's Camp

Roughly the size of France or Texas but with only 3 million inhabitants, Botswana is one of the least densely populated nations on Earth. It's probably most famous for the flooding swamps of the Okavango Delta, which attracts hundreds of species of mammals and birds each year. With its government enacting a high-cost, low-volume approach to tourism, the country has positioned itself as a premium destination, and it's a favorite among safari-goers seeking hordes of animals instead of crowds of tourists.

But Botswana is fast becoming the locus for "a newer, edgier kind of experience," says Dave van Smeerdijk, co-founder of Natural Selection. This 300-mile ATV adventure (roughly the distance from Boston to Philadelphia) promised not a single sighting of lions or elephants, and yet van Smeerdijk was seeing "a really big surge" in interest. There is particular enthusiasm from moneyed millennials, the new generation of sub-Saharan travelers, who want to swap game drives for a more holistic exploration of the land. This trip—four-wheeling over a primordial lake bed in search of surreal rock formations and sleeping under millions of stars undimmed by urban light pollution—offers exactly that.

A day earlier, my journey had begun at Jack's Camp, a legendary property founded in the 1990s by Ralph Bousfield. He named it for his late father, who'd long maintained a rugged site in the area for other eager expeditioners. Natural Selection added the camp to its portfolio in 2016 and used the quiet months during the pandemic to completely rebuild it in 2020, elevating its sumptuous explorer-style tents into a thoroughly luxurious oasis complete with a large lap pool, a tea lounge festooned with oriental textiles and a collection of skeletal oddities so eclectic the government named it an official natural history museum.

After a hardy breakfast under the watchful eyes of various taxidermied animals, we prepared our quad bikes, strapping on our belongings and plenty of extra rations with bungee cords and wrapping colorful *kikoi* cloths (light cotton sarongs) snug around our faces—a futile attempt at protection from the wind- and sunburns that loomed ahead on our daylong transits through the unforgiving environs. Super led the way, and one by one we launched into the unknown, leaving plenty of room between us so as to not be completely choked by the plumes of dust kicked up by our tires.

It was immediately apparent

PREVIOUS PAGE: COURTESY NATURAL SELECTION. THIS SPREAD: COURTESY BRANDON PRESSER

how well our guide fit the name Super—mere minutes after our departure we were swallowed whole by the desert, and yet he knew exactly where we were headed without a compass or single reference point, save the passage of the sun above. It was "the way the ancient Bushmen navigated their environs," he explained. Stories of Super's navigational prowess—shared by my fellow travelers (members of the Natural Selection team test-driving the adventure alongside me) and bolstered by our guide himself—grew more hyperbolic each time we stopped to break up the hours of riding on the pan, swelling into legends of rescuing tribesmen in the wilderness who were unable to find their way home. Priding myself on having a reasonable sense of direction, I felt blind in the Kalahari, able to focus only on my fingers cramping around the handlebars of my quad, until something unusual emerged from the distance in the late afternoon.

"Upside-down trees," Super called them; their spindly branches looked like roots proliferating toward the heavens. We had reached the Lost Island of the Baobabs, he said, our home for the evening.

Unbeknown to us, an advance team from Jack's Camp had stealthily arrived at the site earlier in the day and assembled a cozy outpost without a lick of electricity. A bar cart and lounge chairs sat beneath the vast, gnarled crown of a baobab tree, and nearby was a long dining table with a starched white tablecloth over which a parade of exquisite tajines, lamb kebabs and stewed lentils was marched, all of it cooked over an open fire, including fluffy loaves of bread, proofed and leavened in cast-iron crates.

After a long dinner, Super stared out toward the pans into the black night. "There," he said, pointing, "that's where you'll be sleeping." Away from our rocky outcrop, back along the flatness of the desert floor was a scattering of bedrolls unfurled under the banner of the Milky Way. "This isn't five-star—it's five zillion-star accommodation," Super added with a smirk.

Snug in my bedroll—a canvas sleeping pouch stuffed with blankets and a generous amount of foam padding underneath—I pulled the duvet up to my chin as the desert air plummeted to near freezing temperatures. Only an errant satellite interrupted my wide-eyed wonderment of the sky, with more points of light than I had ever seen. Then I thought of my father, and how, as a child, I'd stand with him in our backyard and list all the stars we could see. ▶

The view from a tent at San Camp

◀ Over the years our lists changed from heavenly bodies to the animals I spotted on various work trips. My father, an amateur photographer, enjoyed snapping photos of his backyard visitors; in return, I'd email him from my job as a travel journalist, detailing the different creatures I'd encountered. I knew it was his furtive way of checking in on me and making sure I was still alive, but I always obliged: lemurs in Madagascar, tarsiers in Borneo, gorillas in Rwanda.

It was hard to imagine that the salt pans beneath me were once teaming with wildlife as well. Tens of thousands of years ago, they lay beneath one of the world's largest lakes. The surrounding fertile lands were a sanctuary for birds, animals and nomadic tribes, who prayed to long-forgotten deities at Kubu, a lonely huddle of boulders that was once an island. We would trundle through a hundred more miles of desolation the next day, the high sun and parched air drying a thousand flecks of mud spatter onto my sunglasses, to reach this prehistoric place of worship.

There's an even greater proliferation of towering baobabs at Kubu, perched atop a large rocky mound resembling a sleeping leviathan. Super led us up its spine, hiking past a smattering of primeval cairns that guided the way to a small altar inside a shallow cave. Safe from the howling wind, he recounted the secrets of these ancient stones, describing the prehistoric remains of early hominids found beneath, along with the chiseled tools left by wayward devotees; the ancestors of the Bushmen. "Perhaps," he whispered, "this was the very first travel destination on Earth…."

The following morning we began our circuit back to Jack's Camp, 50 more miles as the crow flies, if the birds could tolerate such harsh conditions across the extreme blankness of the landscape. Our path, however, was more circuitous, the journey extending well into the afternoon as Super avoided the muddy rifts that splashed across the pan. Finally we spotted the huddle of flapping tents like a distant mirage and watched it grow larger on the infinite horizon, the sun setting just behind.

Our return to camp was timed perfectly for afternoon tea in the Persian pavilion, an elaborate buffet of crumpets, hors d'oeuvres and fresh, Technicolor juices served on an array of silver platters. We flopped our weary bodies down on the thickly woven rugs and pillows–a cloud of geometric stitching–and inhaled our snacks with gusto.

As my fellow travelers swapped videos captured on their GoPros, I snuck back to my tent to shower off the days of Kalahari sand that had encrusted my fingernails and found its way into every wrinkle on my face. The room was exactly as I had left it–heavy red drapes like theater curtains, dark wooden furnishings with golden clasps–but there was something on the writer's desk I hadn't noticed before: a packet of branded stationery.

"*Dear Dad*," I picked up a pen and wrote on the blank letterhead. Instead of my ritual email, I embraced my analog surrounds and started my list. "*Hi from Botswana. I saw absolutely nothing. It was the perfect adventure.*"

Dinner under the stars at the Lost Island of the Baobabs

COURTESY NATURAL SELECTION

THE RETURN OF THE SMALL-BUSINESS SAFARI

After buying shares in several small tourism enterprises in Botswana, including Jack's Camp, Natural Selection officially launched in 2016 as a portfolio of distinguished properties. The company's modus operandi is the partnership model; it buys a minority stake in locally owned lodges to help develop them to an international standard. The goal is to funnel tourism dollars directly into area conservation projects and the coffers of neighboring communities.

Before starting Natural Selection, Dave van Smeerdijk worked for Wilderness Safaris. To mark its 40th anniversary in 2023, that sustainable travel collective has dropped "Safari" from its moniker, pointing to a shift in the way travelers want to explore Africa. "The conversation around the lodge dinner table has changed," says Keith Vincent, Wilderness's chief executive officer. "Instead of animal sightings, guests are eager to learn more about what's happening in the villages nearby."

"Authenticity" is the byword for millennial experience, and a desire for deeper access—for transparency—is informing the way new luxury travelers make their holiday spending choices. "Guests want to know exactly where their money is going," says Vincent, who's spearheading Wilderness's own ambitious partnership model. The aim is to reframe the relationship the company has with its top guides—to cooperate with them as proprietors of their own safari businesses rather than as corporate employees—to improve visitors' connection with local communities and put profits more directly into deserving hands.

HOW TO PLAN THIS TRIP

Luxury travel planner Extraordinary Journeys, which specializes in booking unique experiences and atypical safaris in sub-Saharan Africa, is particularly adept at crafting an international itinerary that seamlessly lands you in the wilds of Botswana from your continental point of entry at Johannesburg or Cape Town. Co-founder Elizabeth Gordon sees many of her clients wanting to pair Botswana with another southern African nation, but she encourages travelers to go deeper here, marrying the salt pans with a handful of days exploring the Okavango Delta to appreciate the diverse but interconnected ecosystems.

Four nights are required to execute this overland journey, which includes an evening at Jack's Camp on either side of the adventure. The trip to Kubu can also begin and/or end at San Camp, a nearby sister property, which also fosters a retro-naturalist (think: Darwin chic) atmosphere with lacquered antiques and plush, white linen tents. Tack on an extra day or two at either property to further explore the area by foot or horseback, visit with the resident colony of meerkats or set out to find wild hyenas, aardwolves and an elusive pride of black-maned Kalahari lions.

The entire Kubu expedition, including an additional evening at Jack's Camp and light aircraft flights to and from the tourist hub of Maun, starts at $14,390 per person, all-inclusive except for gratuities and travel insurance. Departures are weather-dependent during the dry season—June to September. Mobile phone and internet service are unavailable for the entirety of the experience.

THREE CODAS FOR YOUR KALAHARI ADVENTURE

Explore Botswana's other biomes by basing yourself at one of the following lodges.

TAWANA CAMP

The newest addition to Natural Selection's coterie of premium camps will open in August in partnership with the eponymous chiefdom's landowners, who have a storied reputation for wildlife conservation. In addition to spotting large mammals, the lodge will acquaint guests with the local culture and customs.

VUMBURA PLAINS

Perched on slatted decking above the swelling flood plains, Wilderness's newly rebuilt Vumbura marks the third generation of the camp's existence in a decades-long project to re-wild the marshland of the Okavango.

DUMATAU

A riverine resort more than a safari lodge, this Wilderness property's star attractions are the bathing elephants, who are easily spotted from its eight oversize tentalows (tent-bungalows). Spa treatments and seasonal vegetables could serve as a perfect end-of-trip reward after roughing it in the desert.

XICHA
BREWING
PASSIFLORA
HAZY PASSION FRUIT IPA

Moving Past Modelo

Hispanic craft brewers are highlighting Mexican styles and ingredients. *By Tony Rehagen*

Javier and Jose Lopez remember their father's beer. A Durango-born ironworker living in Hermosa, the mostly Hispanic neighborhood in Chicago, their dad was a Budweiser man. But sometimes the brothers, now in their mid- and late 30s, recall that at parties or special occasions, the senior Lopez would break out an import from his native Mexico. It wasn't until the boys were old enough to drink that they discovered the only substantial difference between a Bud and a Corona or Pacifico, all American-style pale lagers, was the country of origin.

Today, as co-owners of Chicago's Casa Humilde Cerveceria, the brothers are among the few but influential 2.2% of craft brewers who are "Hispanic, Latina -o, or of Spanish Origin" (according to an audit from the Brewers Association) putting a more authentic cultural spin on craft beer. Simply slapping on Spanish beer names and Mesoamerican-influenced label art won't cut it—it's about flavor. "It's kind of tying it all together: artwork, branding, ingredients and adjuncts like hibiscus, passion fruit, piloncillo [Latin American brown sugar] and prickly pear," says Jose. "For us it's like culture in a can."

The most prevalent homage to Hispanic heritage is the rise in so-called Mexican-style lagers. Although not officially recognized in the *2022 Brewers Association Beer Style Guidelines*, "Mexican-style" means the use of flaked corn (aka maize) to supplement or replace barley malt, resulting in a lighter body and slightly sweeter taste; think Modelo Especial and Corona, which both use some corn in their mash. But to many small, non-Hispanic brewers in the US, this is less a nod to Mexican culture than a result of the same economic reality that's attracted brewers to corn in central and southern states, and most of Mexico, since the 19th century: The majority of barley is grown in the northern Plains.

"In America, corn is always going to be cheaper and more plentiful than barley," says Malcolm Purinton, beer historian and author of *Globalization in a Glass*. "And if you want to do local, as craft beer does, corn is going to be closer."

For Casa Humilde, proximity and price are secondary. "We use corn because corn is big in our culture," Jose says. "Everyone does a Mexican-style lager. But at the end of the day, I think they are trying to re-create a Modelo. With us, we were trying to elevate it." Their flagship lager, Maizal (Spanish for "cornfield"), is crisp and flavorful with a hoppy bite to accentuate the corn's sweetness. (The brothers don't mind if you drop in a lime and take it to the beach.)

Beyond lagers, Xicha Brewing in Oregon nods to its Latino heritage with Passiflora, a hazy IPA crammed with Cascade, Centennial, El Dorado and Belma hops plus juicy passion fruit; the smoky 505 Pale fall seasonal uses fresh Hatch green chiles trucked in from New Mexico then roasted on-site.

In San Diego, Border X Brewing expands its patrons' palates with ingredients like cinnamon-spiked Mexican hot chocolate in Abuelita's Chocolate stout, hibiscus and agave in its Blood saison and cucumber in the Pepino sour (a bestseller), which bartenders will mix into a zesty michelada. "These are the flavors we grew up with," says Carmen Favela, a first-generation Mexican American and Border X's co-owner and chief executive officer. "We've always been against making a Mexican lager, because we didn't want people to think that's what makes us a Mexican brewery. We're a Latino brewery because we use Mexican flavor."

These traditional Latino flavors are doing more than just drawing in craft beer lovers craving new experiences; the incorporation of authentic Hispanic culture and taste is also prying more Latino beer drinkers from their Budweisers and Tecates into the world of craft beer. The most recent research from Nielsen Scarborough indicates that from June 2020 through November 2021, 5.3% of Hispanic people age 21 and over reported having a craft beer in the 30 days prior, up from 3.7% in 2012-13. For the Lopez brothers, there's one convert they're especially proud to claim: "Our dad," says Javier. "He's a craft beer drinker now."

BEER: COURTESY XICHA BREWING. REMAINING: GETTY IMAGES

Ingredientes Especiales

Flavor is foremost in the newest wave of one-off and seasonal Mexican-style brews

Xicha Brewing Colibrí
West Salem, Oregon
Alcohol by volume: 5.9%

Xicha saves its most vibrant-flavored experiments for one-off, multicourse food-and-beer pairing dinners (up next: a chicha morada-inspired purple corn beer with piloncillo and piña). But this "hummingbird" hibiscus IPA was such a hit that it will be back pollinating the regular taps this spring.

Border X Horchata Golden stout
San Diego
ABV: 9%

Inspired by the creamy Mexican beverage made with melon seeds or white rice, this full-bodied, strong white stout offers signature hints of vanilla, sugar and cinnamon.

Atrevida Maria Bonita pilsner
Colorado Springs
ABV: 5.5%

In Spanish *atrevida* means "daring," and this Latino- and veteran-owned brewery lives up to the name with its offerings from founder and brewmaster Jess Fierro. This light-bodied Pilsner is brewed with guava for a fruity nose and finish.

Casa Humilde Nopalli
Chicago
ABV: 5%

Spanish for the prickly pear cactuses that are a staple of Mexican cuisine, Nopalli lends its name to a tart farmhouse ale balanced with a crisp hop finish. The Lopez brothers characterize it as "agua fresca meets beer."

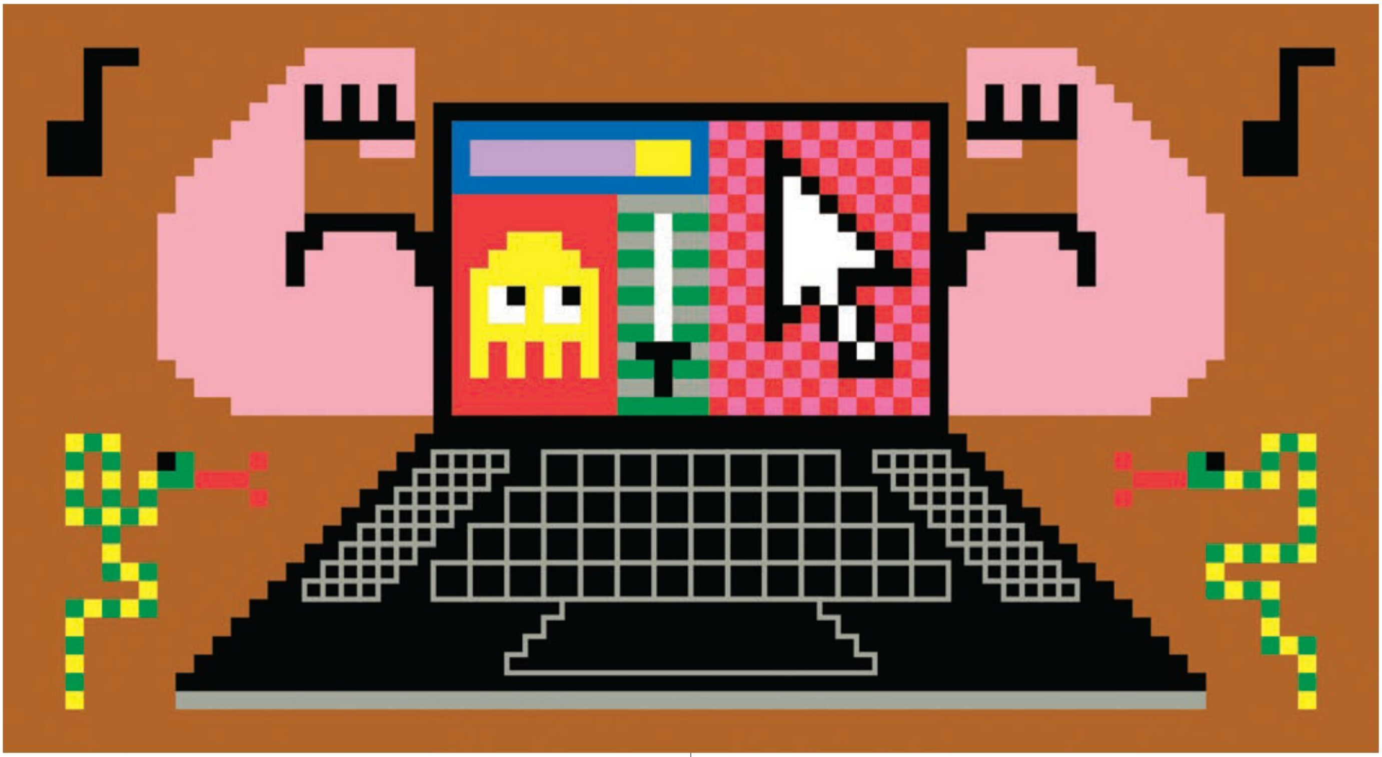

ILLUSTRATION BY MATHIEU LABRECQUE

A Portable Powerhouse

The versatile Razer Blade 17 is more than just a gaming laptop

By Vlad Savov

The best gaming laptops have to make you forget two things: their price, which is usually lofty, and that you're not playing on a desktop PC. That moment came for me with the Razer Blade 17 while I was fighting foes in *Sifu*, one of last year's best releases. I stopped analyzing this $3,500 portable machine and entered an easy kick-ass flow. It was, and is, the best answer I've seen to the challenge of designing a desktop replacement.

The Blade 17 is the sum of many top-tier parts: a 17-inch high-resolution display, fast memory and graphics, and an eight-speaker array all fit into a relatively svelte aluminum unibody design. Generous screen size and excellent audio are key to making video games immersive, but here a thoughtful vapor chamber cooling system also keeps the keyboard and bottom surface from turning into a furnace when the machine is running hard—a common failure of earlier powerhouse laptops.

Also distinguishing it from other mobile gaming rigs is the Blade 17's restrained aesthetic. Sure, it still has pulsating LED flourishes throughout, but you can switch those off and have a toned-down, matte-black laptop for the office. No baroque extrusions or flashing energy-drink holders here. (Razer did once offer one of those and still sells caffeinated drink powder.)

Blade 17 is at the top of the price range in a competitive market. Lenovo, whose Legion brand just turned six years old, has come up with intriguing features such as pressure-sensitive W, A, S and D keys—the ones typically used to move a player character. And the Corsair Voyager somehow fits a durable, satisfying mechanical keyboard in its chassis. Dell's Alienware, an elder statesman, recently introduced the thinnest 14-inch gaming laptop at CES 2023 in Las Vegas.

The reason I rate the Blade 17 highest among them is the way its attributes ultimately transcend the gaming category. The hardware that makes it a good machine for games also makes it an excellent portable cinema. Its color accuracy and performance mean I can trust it with photo editing in Adobe's Lightroom. And should I want to add an extra monitor or two, it again has the capability to run the work environment and the ports for everything to plug into.

The downsides? Battery life hovers around five hours, about half what most modern thin-and-light laptops can achieve. And as announced at CES: A little bit bigger and beefier Blade 18 is coming this quarter. No matter which expensive laptop you choose—and the latest Alienware and Lenovo offerings could sway some people—you'll always be only a few months away from a better one showing up. (An upside: The arrival of the Blade 18 should nudge down the price of the 17.)

For now, as I brawl my way to righteous vengeance once more in *Sifu* and look forward to *Hades II*, *Baldur's Gate III* and *Diablo IV*, the Blade 17 leaves me wanting nothing more. Whatever the price for such satisfaction, it's worth it. Ⓑ

The Old Drip Is Still Hip

A Moccamaster KBGV Select remains the simplest, most reliable route to a consummate cup

By Matthew Kronsberg

Photograph by Janelle Jones

In the world of home coffee brewing, complexity is all too frequently equated with quality. If your kitchen counter isn't laden with a collection of scales, timers and thermometers worthy of *Breaking Bad*, or an espresso machine with a submarine's worth of knobs, are you even serious about getting caffeinated? The stupendously simple (and stylish) Dutch-made $359 Technivorm Moccamaster KBGV Select lets you answer confidently in the affirmative. With only two switches, one for power and one to indicate whether you're making a full or a half carafe of joe, this Specialty Coffee Association Certified Home Brewer reliably and quickly kick-starts your day.

THE COMPETITION

- The $295 Ratio Six, designed to be a home version of commercial batch brewers, comes in a beautifully minimalist package. One button starts the brewing process, which includes a 30-second pause for your coffee to "bloom," releasing CO_2, which can add sourness, before extraction.
- For a slew of brew options, consider the $300 Breville Precision Brewer Glass. It comes with both conical and flat-bottom filter baskets, customizable water temperatures, and settings for iced coffee, cold brew and more.
- The $335 Zwilling Enfinigy drip coffee maker uses stainless steel in both its corrosion-proof boiler and its 18/10 mesh reusable coffee filter. A 10-cup thermal carafe means there's always enough.

THE CASE

The design of the Moccamaster KBGV Select is little changed from Moccamaster's first KBG machine, released in 1974. Angular and vaguely brutalist, it has a timelessness that few appliances ever achieve—a good thing, because with a five-year warranty and robust, repairable construction, it's built to last. Inside the machine, still hand-constructed in the Netherlands, a copper heating element quickly brings water into the right temperature range: 196F to 205F. Up top, a steel shower head disperses it evenly over the ground coffee. The focus on functionality doesn't preclude fun, however; the KBGV Select now comes in more than 20 colors, ranging from austere black to sunny Yellow Pepper. *$359; moccamaster.com*

TECHNI VORM
MOCCAMASTER

The Secret to EV Success Is in the Software

By Alex Webb

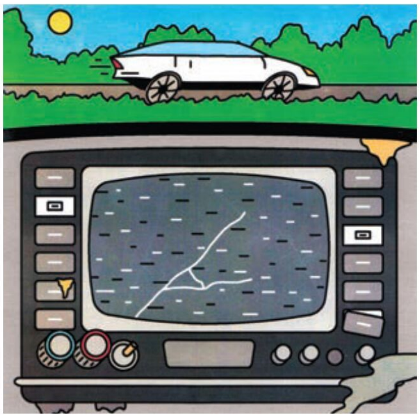

ILLUSTRATION BY GEORGE WYLESOL

There's a common misconception about what makes electric vehicles so disruptive. Automakers have long considered their core technology to be the powertrain—essentially the engine and transmission. For all of the components they bought from suppliers, it was a pretty safe bet that premium carmakers in particular would assemble the powertrain themselves. That, they thought, is what set them apart. Thus, BMW AG's advertising slogan is "*Freude durch Fahren*" ("joy through driving").

Electric vehicles are changing that, not because electric powertrains are better, but because, with a few exceptions at the superhigh end, they're all broadly similar. The driving experience in an electric BMW differs little from that in an electric Cadillac. That's the problem: The powertrain has ceased to be the differentiator.

Tesla Inc. has made a very good case for what should take its place: "user experience," as Silicon Valley likes to call it. Much of it comes down to the software interface that runs the vehicle. Tesla drivers rave about the iPad-like display that controls everything from music to driving modes, meaning their Model 3 interior has no fiddly knobs or buttons.

This year's CES, the gargantuan tech and automotive expo in Las Vegas, showed the extent to which carmakers are waking up to the importance of software and user experience. BMW bragged of the "digital soul in every vehicle" and unveiled concept cars that were also bereft of knobs.

Instead of turning to suppliers such as BlackBerry Ltd. or Samsung Electronics Co.'s Harman unit, automakers are bringing more of their software development in-house. Volkswagen's Cariad has hired 6,600 software engineers in the past two years and wants to add 1,700 more this year.

Software-enabled automotive revenue will top $700 billion by 2030, UBS Group AG estimated in November, about a quarter of the car industry's total sales. Much of that will simply replace revenue lost elsewhere.

Auto companies fear the fate of the original cellphone makers that sacrificed much of the value in the smartphone market to Google and Apple Inc.—companies that mastered the user experience with superior software. Those tech giants are now making moves on autos, and not just with their self-driving car projects. Apple announced an update of its CarPlay system in June that does more than just show content from your iPhone, integrating more deeply with the car to display speedometers and other performance data.

If it manages to become the default vehicular interface, then carmakers risk ceding a large slice of that $700 billion in revenue, because Apple could become the gateway for over-the-air updates and in-vehicle content. Think the App Store, where the company gets a 30% cut of all transactions, but for cars. It's the worst-case scenario, and one of which carmakers are cognizant. But many still need to up their game. Ⓑ

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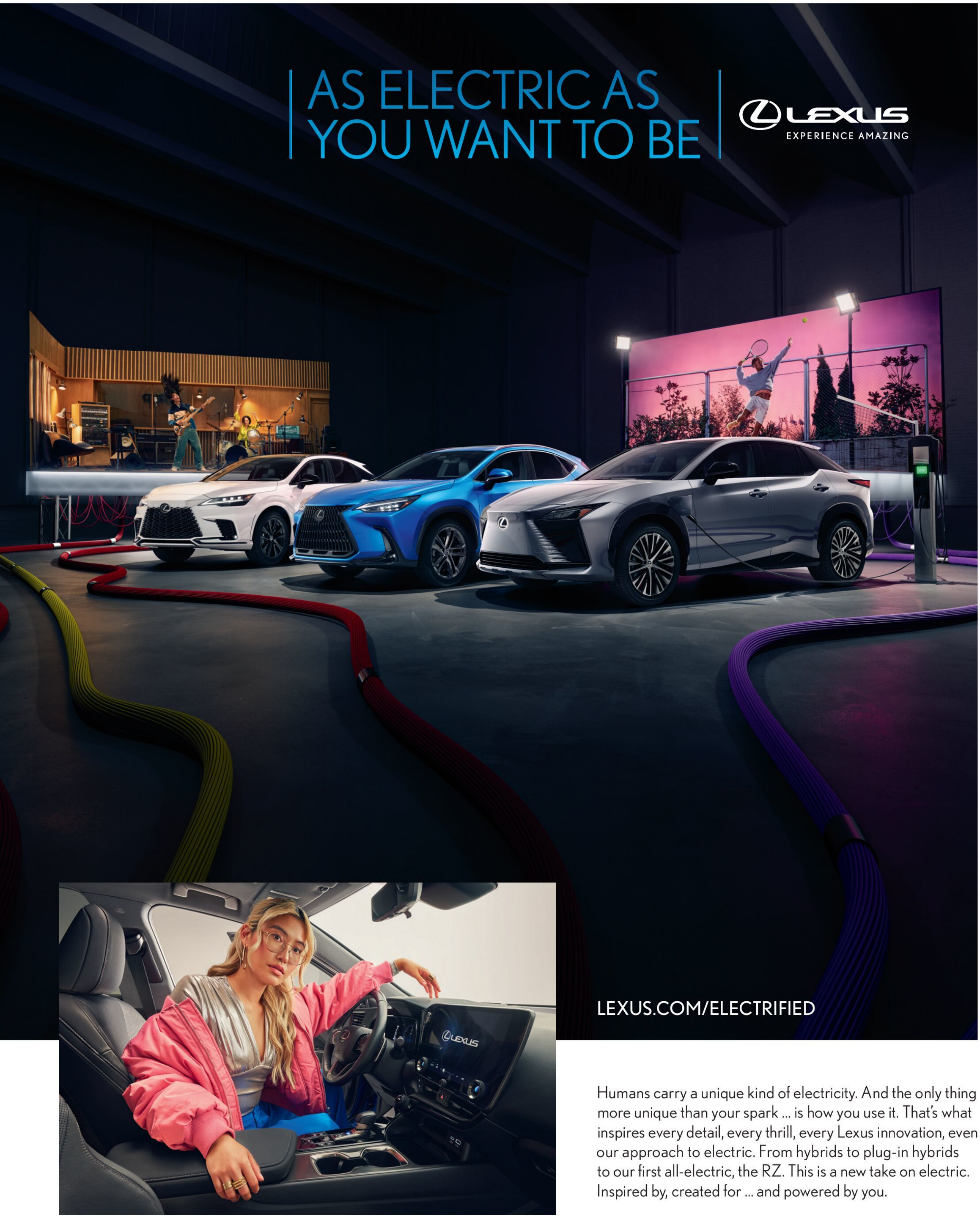
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